2014

Heal Utah, Et. Al., Plaintiffs/Appellants, v. Kane County Water Conservancy District, Et. Al. Defendant/Appellees.

Utah Court of Appeals

IN THE UTAH COURT OF APPEALS

HEAL UTAH, et al. Plaintiffs/Appellants vs. KANE COUNTY WATER CONSERVANCY DISTRICT, et al., Defendants/Appellees.	**APPELLATE CASE NO. 20140429** (Case No. below 120700009)

BRIEF OF APPELLEES

Kane and San Juan County Water Conservancy Districts and Blue Castle Holdings, Inc.

An appeal from a judgment of the Seventh District Court sitting without a jury
Judge George M. Harmond, Jr.

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LIST OF PARTIES
(R. 1 and 121)

HEAL UTAH
a Utah non-profit organization

MOKI MAC RIVER EXPEDITIONS, INC.
a Utah corporation

BILL AND JUNE ADAMS
individuals

URANIUM WATCH
a Utah non-profit organization

PAMALA R. HACKLEY
an individual

NORM GUICE
an individual

ELFREDA LOU MORTENSON
an individual

LIVING RIVERS
a Utah non-profit organization

KATHRYN BAKER
an individual

WAID AND CHERYL REYNOLDS
individuals

LISA RUTHERFORD
an individual

PAUL VAN DAM
an individual

NAOMI FRANKLIN
an individual

KATHLEEN CORR
an individual

TOM AND PAMELA MOONEY
individuals

CENTER FOR WATER ADVOCACY
a Utah non-profit organization

UTAH RIVERS COUNCIL
a Utah non-profit organization

HOLIDAY RIVER EXPEDITIONS, INC.
a Utah corporation

DAVE ERLEY
an individual

KANE COUNTY WATER CONSERVANCY DISTRICT

SAN JUAN COUNTY WATER CONSERVANCY DISTRICT

BLUE CASTLE HOLDINGS, INC.
a Delaware corporation

KENT L. JONES, Utah State Engineer

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JURISDICTION

The Utah Supreme Court transferred the appeal on May 19, 2014, (R. 659), establishing jurisdiction in this court pursuant to Utah Code Ann. §78A-4-103(2)(j)

PARTIES

This case began as an informal proceeding before the Utah State Engineer. (R. 2 ¶1; R. 122 ¶1). Kane and San Juan County Water Conservancy Districts (the "Districts") applied to the State Engineer to change the place and nature of use of certain water rights. *Id.* Blue Castle Holdings, Inc. leases those rights as part of the development of a nuclear power station at Green River, Utah. (R. 507-08). Blue Castle took the lead in pursuing the applications. (R. 616-17 ¶12). Therefore, the Districts and Blue Castle are referred to together as the "Applicants." (R. 615).

Appellants protested. Following State Engineer approval, they challenged that decision in district court. These parties are referred to together as the "Protestants." These designations make further sense because the Applicants had the burden of persuasion. *Searle v. Milburn Irrig. Co.,* 2006 UT 16, ¶57, 133 P.3d 382 ("The burden of persuasion remains on the applicant throughout the application process . . . .").

ISSUES AND STANDARDS OF REVIEW

Whether Protestants' brief is fatally deficient where it (a) fails to address the trial evidence, (b) invokes items not offered at trial, (c) is a mere copy and paste of a supplemental protest in an informal administrative proceeding that preceded the trial, (d) relies on testimony offered at the informal proceeding prior to the *de novo* trial, (e) fails to

identify the standard of review for any issue, and (f) includes no marshaling attempt at all despite purporting to challenge factual findings.

Standard of Review: A challenge to the legal sufficiency of an appellate brief turns on a threshold determination of whether the brief complies with the Utah Rules of Appellate Procedure. *State v. Green,* 2005 UT 9, ¶¶9-12, 108 P.3d 710 (before an appellate court "turn[s] to the substantive issues on appeal," it must determine whether a party has "fail[ed] to follow appellate requirements for adequate briefing"). This Court makes that determination "not as a matter of gauging procedural compliance with the rule, but as a necessary component of our evaluation of the case on its merits, as viewed through the lens of the applicable standard of review." *State v. Nielsen,* 2014 UT 10, ¶34, 326 P.3d 645.

Based on Protestants' brief, the following restated issues (Utah R. App. P. 24(b)(1)), appear to be raised:

Issue 1: Whether the district court erred in finding reason to believe that there is unappropriated water in the source, namely the Green River specifically and the Colorado River Basin generally. (*Cf.* Protestants' Brf. at 5, no.1).

Preservation: This issue was raised (R. 10-12), and decided (R. 512-14; 622-28).

Standard of Review: The issue of "unappropriated water" is rooted in Utah Code Ann. §73-3-8 (1)(a)(i), establishing the "rule of law" Applicants satisfied. Like the question of "impairment," also part of section 73-3-8's checklist, "[t]his issue is best viewed as a mixed question of fact and law, as the district court must first find facts relevant to the issue of impairment and then determine whether those facts are within the ambit of 'impairment'

such that the change application should be rejected." *Searle*, 2006 UT 16, ¶15 (citation omitted).

Accordingly, this Court grants "some level of deference to the district court's application of the law to the facts." *Searle,* ¶16. Because district court discretion "varies . . . according to the issue . . ." this Court first determines the level of that deference. *Id.* (citation omitted). Relying on factors identified in *State v. Pena*, 869 P.2d 932, 938-39 (Utah 1994), this Court asks whether

> (1) the facts at issue are so complex and arise in such variation that it would be impractical to supply a rule that adequately accounts for the implications of all the facts; (2) the context in which the application of law to facts occurs is somehow novel or new, such that appellate courts are unable to discern and clearly state what factors are outcome determinative; and (3) the district court has observed facts that are not adequately preserved by a record of the proceedings before it, e.g., witness demeanor.

Searle, ¶16 (citation omitted).

Searle addressed the application process following a denied change. *Searle*, ¶7. Although the Applications in this case are approved, the district court was bound by the same statutory criteria in *Searle. See* Utah Code Ann. §73-3-3(5)(a)(state engineer must apply the section 73-3-8 factors in evaluating a change application) and *Searle*, ¶34 (district court "stands in the same position as the state engineer" in deciding a change application).

Searle's analysis centers on the question of impairment—whether the proposed change in water use would impair other rights. *Id.* ¶17. The first issue—"unappropriated water"—is the flip side of the impairment coin. If no water is available, any new use risks impairing existing rights. Thus, the "myriad factual scenarios," *id.,* generated by the

impairment question are alive and well in deciding the issue of unappropriated water, "making it exceedingly difficult to craft a uniform rule neatly applicable in all situations." *Id.* (citation omitted). Despite a century of Utah case law on water use there is no firm constraint on district court discretion concerning unappropriated water. But "the district court enjoys an appreciable advantage over appellate courts in this context due to its" proximity to the witnesses. *Id.*

These factors support deference on the broader end of *Pena's* scale. But, "given the importance of water in this state, there is a strong public policy interest in promoting consistent and predictable results [concerning] the permissible use of that water. Therefore, it is appropriate that district court discretion be somewhat constrained in this area." *Searle,* ¶18 (citation omitted). Accordingly, deference on the issue of unappropriated water should match *Searle's* review on impairment: "significant, but not broad, discretion when determining whether evidence of" unappropriated water is sufficient to permit application approval. *Id., citing Butler, etc. v. Pinecrest Pipeline Op. Co.*, 2004 UT 67, ¶50, 98 P.3d 1 (reviewing beneficial use under a mixed question standard and granting "significant, though not broad, discretion" to district court decision.

Findings of fact that inform the trial court's decision on mixed questions are still reviewed for clear error. Utah R. Civ. P. 52(a). Applying facts to given rules of law, resulting in what is ultimately a legal ruling, is reviewed for correctness. *Heber City Corp. v. Simpson*, 942 P.2d 307, 309 (Utah 1997). "For a mixed question of law and fact, which requires a trial court to determine whether a given set of facts comes within the reach of a given rule of law," this Court "review[s] legal questions for correctness," but "may . . . grant

a trial court discretion in its application of the law to a given fact situation." *Covey v. Covey*, 2003 UT App 380, ¶17, 80 P.3d 553 (alterations and omission in original)(quotations and citations omitted).

Issue 2: Whether the district court erred in finding reason to believe that the changed water use will not adversely affect the natural stream environment. (*Cf.* Protestants' Brf. at 6, no.2).

Preservation: This issue was raised (R. 22; 140) and decided (R. 524-27; 640-44).

Standard of Review: Same as issue 1.

Issue 3: Whether the district court erred in finding reason to believe that (a) the project plan is economically feasible and (b) Blue Castle has the financial ability to complete the proposed works. (*Cf.* Protestants' Brf. at 7, no.3).

Preservation: These issues were raised (R. 15-18; R. 133-38) and decided (R. 632-38).

Standard of Review: Same as Issue 1.

DETERMINATIVE STATUTES

Utah Code Ann. §73-3-8 (Addendum 1)

Colorado River Compact – Utah Code Ann. §73-12a-1 to -3.

Upper Colorado River Basin Compact – Utah Code Ann. §73-13-9 to -12.

DETERMINATIVE REGULATIONS

10 C.F.R. PART 52

DETERMINATIVE RULES

Utah R. App. P. 24

Utah R. Civ. P. 52(a) (relevant portion)

> Findings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge the credibility of the witnesses.

STATEMENT OF THE CASE

Nature of the Case: On January 20, 2012, the Utah State Engineer approved two change applications, a35402, based on approved Water Rights 89-74, 89-1285 and 89-1513 (Kane); and a35874, based on approved Water Right 09-462 (San Juan) ("Applications") concerning the use of water for a proposed nuclear power plant near Green River. Protestants challenged that approval in a *de novo* action. (R. 1, 121).

Although identified as "defendants" below (R. 1), the Applicants have the burden of persuasion throughout the change application process. *Searle*, ¶57. The district court was asked to approve the Applications, which propose to divert 70 cubic feet per second ("cfs") continually from the Green River, or approximately 53,600 acre feet ("af") per year. (Tr. Ex. 1, 5). Previously, the water rights were approved for use in steam power generation at coal fired power plants that were never built. That same use—electric power generation—was approved here.

The Utah State Engineer, Kent Jones, approved the Applications in 2012. (R. 615). Certain protestants appealed (*See* Utah Code Ann. §73-3-14), requiring the trial court to apply the same statutory criteria *de novo*. *Searle,* ¶35. The district court approved the Applications, explaining its ruling in a Memorandum Decision (R. 507), followed by Findings of Fact, Conclusions of Law and a Judgment. (R. 614)(Addendum 3).

Course of Proceedings and Disposition Below:

The Districts filed the Applications in 2009 to change the points of diversion of the water to the Green River located near Green River, Utah. The proposed place of use is at the site of the proposed nuclear power plant in Emery County, located approximately 4.5 miles west of the Green River. The Applications were supported by Blue Castle, which as the project developer, took the lead at trial.

Following a number of protests, the State Engineer held an administrative hearing on January 12, 2010, and thereafter conducted an extensive investigation. In two more or less identical decisions dated January 20, 2012 (Trial Exs. 2, 6), the State Engineer approved the Applications to change the points of diversion and allowed diversion and depletion of 53,600 af and a diversion rate of up to 75 cfs.[1] The State Engineer denied a Request for Reconsideration on February 28, 2012. (R. 10, ¶45).

Protestants timely filed two actions in March, 2012, challenging the State Engineer's decisions. (R. 1 and 121). The actions were consolidated by stipulation in May 2012. (R. 117). The case was tried to the bench September 23-27, 2013. The Applicants called nine witnesses in their case in chief. Protestants called four witnesses. Applicants called two rebuttal witnesses. (R. 671 at 192-222).

The district court issued a 25 page Memorandum Decision the following November, approving the Applications. (R. 507-531). Findings, Conclusions and Judgment were

[1] Trial exhibits 2 and 6.

entered on April 21, 2014. (R. 614-50). Protestants timely appealed on May 15, 2014. (R. 651). The Utah Supreme Court assigned the case on May 19, 2014. (R. 657). This Court dismissed the appeal after Protestants failed to file a brief but allowed ten days to cure. After a couple of false starts due to defective briefs, Protestants filed a brief on October 15.

NOTE CONCERNING APPELLANTS' BRIEF

"It falls squarely upon an appellant to surmount the filing, briefing, and persuasion burdens associated with an appeal." *State v. Robison*, 2006 UT 65, ¶21, 147 P.3d 448. Because the trial is *de novo*, the administrative process that preceded it is irrelevant. This Court has repeatedly reminded parties that our adversary system depends on fidelity to the rules and a square shouldered acceptance of the burden of persuasion. "An inadequately briefed claim is by definition insufficient to discharge an appellant's burden to demonstrate trial court error." *Griffin v. Cutler,* 2014 UT App 251, ¶17, --P.3d --.

It is difficult, to say the least, to respond to an appellate brief that does not address the trial from which the appeal arises. Protestants' brief is a cut and paste of a "Supplemental Protest" filed in 2010 with the Utah State Engineer after the informal administrative hearing. The Supplemental Protest is Addendum 2. Comparing the brief and the Supplemental Protest reveals that almost no effort was made to write a brief for this Court.

THE FACTS

References to the Trial Transcript and Trial Exhibits: The trial transcript consists of five volumes, identified as R. 668 through 672 and will be referred to by that first page designation followed by the transcript page. The trial exhibits are referred to as "Tr. Ex. ____."

Protestants identify four issues—unappropriated water, natural stream environment, economic feasibility and financial ability. (Brf. at 5-9). The facts center on those issues.

1. The underlying water rights.

The Applications are based on existing water rights owned by Kane and San Juan County Water Conservancy Districts. (R. 615). The San Juan right is water right no. 09-462, originally authorized for diversion from the San Juan River for steam power generation at a coal fired power plant. (R. 616 ¶8; Tr. Ex. 1 at 1). Kane Water Right Nos. 89-74, 89-1285 and 89-1513, representing 29,600 af, were previously approved for diversion from Lake Powell and Wahweap Creek. (R. 616 ¶3). The Kane right had been previously approved for a coal fired power plant. (R. 616 ¶4; Tr. Ex. 6 at 1). Neither power plant was built. *Id.*

In preparation for obtaining federal licensing of the Project, Blue Castle has secured water and some of the real property necessary for operation. (R. 616 ¶2). Transition Power Development, LLC, the predecessor of Blue Castle Holdings ("Blue Castle") leased the Kane and San Juan Rights and proposes to develop a multi-unit nuclear powered electrical generating plant near Green River, Emery County, Utah. (R. 615-16 ¶¶1-10).

The Kane water right was filed on January 15, 1964, by another party to develop coal-fired power near Lake Powell, with the water diverted from Lake Powell/Colorado River. The Kane water right was approved on September 3, 1965, but was subordinated to the Central Utah Project water rights and several other applications in the Uinta Basin and the Duchesne River. Over the years, the Kane water right was transferred several times and, on November 24, 2003, it was transferred to Kane. (R. 616 ¶¶4-6).

Transition Power also leased from San Juan Water Right No. 09-462, representing 24,000 acre-feet of water, with the point of diversion located on the San Juan River in San Juan County, Utah. (R. 616 ¶7). The San Juan water right at issue is a segregated portion of a water right originally filed on October 14, 1965. The water right was segregated and approved in 1967 for a coal-fired power plant near Mexican Hat, Utah. The priority date for the San Juan water rights is April 21, 2000, as a result of an application for reinstatement after the first approved application lapsed. (R. 616 ¶¶8-9).

The water represented by both of these leases has previously been approved for use in the operation of steam power generation at coal-fired power plants in Kane and San Juan counties, but because those projects are no longer viable, the Districts have leased the water rights to Blue Castle. (R. 616 ¶10).

2. The Project

The Applications seek to use the Kane and San Juan water rights for a nuclear power station with a capacity of 1,500 to 3,000 megawatts. (R. Tr. Ex 2 at 1; 6 at 1; Tr. Exs. 1 at 4 and 5 at 3). The Project would consume and deplete the entire 53,600 af represented by the Applications, drawing a maximum of 75 cfs continuously from the Green River, primarily for use in creating steam to generate power and for cooling the plant. The Applications also seek approval to store 2,000 acre-feet of water in a reservoir located on the Project site. (R. 617 ¶¶13-14).

If constructed, the Project would be Utah's first nuclear power plant. Blue Castle is developing the Project pursuant to 10 C.F.R. Part 52. The Project is phased, and if it proceeds, the Project will require an environmental impact assessment prior to the

submission of an application for an Early Site Permit to the Nuclear Regulatory Commission, and then a full environmental impact statement prior to the approval of the Early Site Permit. In order to construct and operate the Project, Blue Castle would need a combined operating license from the NRC.[2] (R. 617 ¶¶18-19). Environmental impacts must be resolved before the Project can proceed. (R. 671 ¶20).

Ultimately, whether the Project is licensed or built is within the exclusive jurisdiction of the United States Nuclear Regulatory Commission.[3]

3. Unappropriated Water

"<u>There is unappropriated water in the proposed source</u>." (R. 622).

The use of the Green River's water is regulated by the Colorado River Compact of 1922 ("Compact") and the Upper Colorado River Basin Compact of 1948 ("Upper Compact"). Utah Code Ann. §73-12a-1 *et seq.* and §73-13-1 *et seq.* (R. 622 ¶21). Under the Compact, Article III, the Upper Basin states (i.e., Utah, Colorado, Wyoming, New Mexico) are required not to deplete the flow of the Colorado River using water rights perfected after the 1922 Compact was signed unless the Upper Basin provides to the Lower Basin 75 million af of water in any continuous ten year period, as apportioned at Lee Ferry, Arizona, which equates to 7.5 million af per year on average. In addition, up to 750

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[2] *See* 42 U.S.C. §16014(a)(2)

[3] "[T]here is also no doubt that [nuclear facility] construction permits, like all other licenses, can be issued only consistently with the health and safety of the public. But the responsibility for safeguarding that health and safety belongs under the statute to the [NRC]." *Power Reactor Dev. Co. v. International Union,* 367 U.S. 396, 404 (1961).

thousand af per year must be delivered to Mexico.[4] (R. 622 ¶22). Since 1896, the Upper Basin states have always delivered the required water to the Lower Basin and Mexico. *Id.* ¶23.

Under the Upper Compact, after subtracting 50,000 af for Arizona, the State of Utah is apportioned 23 percent of the remaining water of the Basin, which is calculated at approximately 1.4 million af per year. (R. 623 ¶24). To date, it is estimated by the State Engineer and Jerry Olds, former State Engineer, that Utah has developed and uses approximately 1 million af per year of its Colorado River allocation, leaving approximately 400,000 af (estimates are between 360,000 and 400,000 af) per year currently unappropriated. *Id.* ¶25. There is a difference between water for which an application to appropriate has been made and approved and appropriated water that is water actually put to beneficial use. *Id.* Water can be approved for use under an application but that does not mean that the water is appropriated, that is, beneficially used. *Id.*

The Kane and San Juan water rights at issue here are among the many approved but undeveloped applications on the Colorado River drainage in Utah. *Id.* ¶26. *See also* Trial Ex. 12. At the present time, there are at least 574,600 af of approved yet undeveloped water in the Upper Colorado River Basin in Utah for which the State Engineer has previously approved appropriation applications, but which remains unappropriated, including the Kane and San Juan Applications and also including Navajo and Ute Tribe reserved water rights,

[4] The relationship between "Lee Ferry" and "Lees Ferry" may be confusing. The Compact divides the upper and lower basins at "Lee Ferry." One of the gauges used to measure the flow, however, called the "Lees Ferry Gauge," is now located about one mile upstream from "Lee Ferry." (R. 622 n. 1).

leaving approximately 400,000 af of Colorado River Basin water unappropriated. (R. 623 ¶27).

Most of this 574,600 af of water has not been applied to beneficial use, and it is unappropriated water available for use by those with approved applications at least up to the limit of Utah's Colorado River allocation. *Id.* ¶28; Trial Ex. 12. If all of the water represented by the approved applications for appropriation were actually appropriated, that is, put to beneficial use, then Utah's allocation would in fact be over-appropriated. *Id.* At this point, however, the 574,600 af of water has not been put to, or applied to, some useful industry or to a beneficial purpose. Under Utah law, the Upper Basin in Utah is not, in fact, over appropriated. *Id.* ¶29.

The United States Bureau of Reclamation estimates that even under a rapid growth scenario, by the year 2060, Utah will only have developed 1.38 million af of the 1.4 million acre-feet allotted to it under the Upper Compact. In addition, the underlying water rights associated with the Kane and San Juan Applications are approved for appropriation and have been accounted for in the approved, but undeveloped Utah water of the Upper Basin. (R. 623-24 ¶30).

The Green River has an average volume of 3.9 million af per year, as measured from 1977 to 2007. (R. 624 ¶31). For an average water year, the base flow ranges between 1,800 and 3,000 cfs. The undisputed evidence is further that the annual mean flow of the Green River, measured at the USGS station at Green River, Utah, for more than a century is 6,048 cfs, with an annual mean volume of 4,381,000 af. *Id.* The flows fluctuate according to the

time of year, being higher during spring runoff and times of precipitation, and lower during dry summer months and colder months when the river ices up in areas. *Id.* ¶32.

Based on historic flows at the Green River station, there has always been sufficient water at the Green River USGS station to accommodate the amount of the diversion requested in the Applications. *Id.* ¶33. There are approximately 139 approved water rights (excluding stock watering rights) on the Green River with points of diversion located between its confluence with the Price River and confluence with the Colorado River, which water rights are approved to divert 125,000 af of water and deplete 56,500 af. *Id.* ¶34. If all the existing approved rights were in use, the total depletion from the Green River would be approximately 1.29% of the average volume measured at the Green River station. *Id.* ¶35.

Most of these depletions occur above the Green River station. At this time, there remains in Utah approximately 369,000 af of water in the Colorado River basin available for development and to be applied to beneficial use. *Id.* ¶36. It has never been necessary to regulate the Green River by priority because there have always existed adequate flows in the Green River to accommodate the existing appropriations. *Id.* ¶37.

The additional depletion of water from the Green River to support the Project would be 1.22% of the annual mean volume of the River, based on the data from the Green Giver station gauge. *Id.* ¶38. This would result in a maximum expected decrease in the depth of the Green River of less than one and one half inches, and an average decrease in width of the

Green River of approximately one foot, at the point of the Green River USGS gaging station. (R. 625 ¶38.a.). The average width of the Green is approximately 350 feet. *Id.* ¶38.b.[5]

Protestants admitted three facts on the issue of unappropriated water:

1. That the "underlying water right[s] associated with the [Applications] [are] approved appropriation[s] that [have] not yet been developed."

2. That "[a]pproval of [the Applications] do[es] not constitute a new appropriation of water within the Colorado River Basin . . . ."

3. They are instead "new diversion[s] from the Green River, "which is part of that Basin."

(R. 625 ¶38.c. *See also* Tr. Ex. 47 at 3-4).[6]

4. Natural Stream Environment

"<u>There is reason to believe that the Applications will not unreasonably affect the natural stream environment</u>." (R. 640).

The issues raised at trial relative to the natural stream environment primarily focused on the effect on endangered species and fallout from the cooling towers. (R. 640 ¶87).

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[5] Trial Ex. 17 (Addendum 4) illustrates the flow of the Green River in an average year, superimposed with a red line showing the Project's 70 cfs withdrawal, illustrating minimal impact in an average year. (*See* R. 668 at 97). Trial Ex. 12 (Addendum 5) identifies the approved but undeveloped applications in the Colorado River Basin. (R. 668 at 88).

[6] The district court explained what these admissions mean:

> Approval of the Applications does not constitute a new appropriation of water within the Colorado River Basin. The Applications are instead new diversions from the Green River, which is part of that Basin. The water associated with the Applications is part of Utah's allocation under the Colorado River Compact. Rather than divert water from Lake Powell and the San Juan River, as previously authorized, the Applications propose to divert from another point still within the Colorado River drainage. Therefore, approval does not constitute a new appropriation. Rather, approval permits the use of already approved water, but at a different place . . . .

(R. 627).

There exists four species of endangered fish that are unique to the Colorado River system. The stretch of the Green and Colorado Rivers from Flaming Gorge Reservoir to Lake Powell includes critical habitat for the endangered fish. *Id.* ¶¶88-89. The Green River in particular is designated as critical habitat for the four endangered fish, but Blue Castle's expert testimony was that the water withdrawn from the Green River would have a de minimus effect on the protected species. *Id.* ¶90.

Defendants' expert, Dr. Harold Tyus, testified that there would be an effect, but was unable to opine as to the extent of that effect without further research. *Id.* 91. Dr. Tyus testified that the surface area of the average backwater on the river may be reduced by as much as 50%, at times when the river depth would be decreased by over 1.5 inches. However, Dr. Tyus was unsure of the impact of the potential loss of this surface area on the fish population. (R. 641 ¶91 a.b.).

Testimony from Dr. Hardy, Applicants' expert, indicated that the depth necessary for the fish larvae and fry to survive and thrive was between 29 to 38 centimeters (i.e., approximately 11 to 14 inches). The evidence disclosed that with the proposed withdrawal for the Project, 99% of the time the flow rate of the river would exceed 700 cfs, and the change in depth would be less than 1.5 inches. 95% of the time, the flow rate would be above 1,300 cfs and the corresponding drop in river depth would be below 1 inch. There is no evidence that the proposed withdrawal would have an unreasonable impact on the natural stream environment. (R. 641 ¶92).

The State Engineer acknowledged that the National Environmental Policy Act (NEPA) processes would ultimately reach the conclusion of whether the Project would

unduly impact the natural stream environment and the protected fishes. *Id.* ¶93. In fact, the purpose of NEPA is to address the questions raised by Dr. Tyus. Based on the NEPA requirement, the State Engineer determined that he had reason to believe that the NEPA process would identify measures necessary to mitigate negative impact to the natural stream environment. Regardless of any further investigation by the State Engineer, the Project will be subject to NEPA, and the State Engineer conditioned the Application on a biological consultation with the U.S. Fish and Wildlife Service, pursuant to Section 7 of the Endangered Species Act. *Id.* ¶94.

The Upper Colorado River Endangered Fishes Recovery Implementation Program Recovery Action Plan (RIPRAP) is a partnership created in 1988 to address the recovery of the four endangered fishes in the Upper Basin. *Id.* ¶95. RIPRAP provides participants with a "reasonable and prudent alternative" to avoid a jeopardy finding. Existing diversions are allowed under RIPRAP, as are new diversions. (R. 642 ¶95.b.).

Utah is a partner in RIPRAP, and the program is supported by the State Engineer. The goal of RIPRAP is to achieve naturally self-sustaining populations and protect the habitat and water flows on which they depend such that the fishes can eventually be de-listed. Requiring a Section 7 consultation will ensure that the Project must cooperate with the United States Fish and Wildlife Service ("USFWS") and the Bureau of Reclamation to coordinate releases and take other steps to reach the goals of RIPRAP. *Id.* ¶95 c.-e.

The US Bureau of Reclamation is working with the USFWS to develop an operation plan for Flaming Gorge Dam releases in order to meet the goals of RIPRAP. *Id.* ¶96. In September 2005, the USFWS released the Final Biological Opinion on the Operation of

Flaming Gorge Dam. The Final Opinion stated that the operation of the dam would achieve the flow and temperature recommended for the survival of the fishes, while maintaining all authorized purposes, including the development of water resources. *Id.* ¶97.a. Several months later, in February 2006, the Bureau of Reclamation issued a Record of Decision ("ROD")(Tr. Ex. 20) which stated similar goals. It stated:

> The purpose of the proposed action is to operate Flaming Gorge Dam to protect and assist in recovery of the populations and designated critical habitat of the four endangered fishes, *while maintaining all authorized purposes of the Flaming Gorge Unit of the Colorado River Storage Project (CPSP) including those related to the development of water resources in accordance with the Colorado River Compact.* [Emphasis added.]
>
> ...
>
> This action is limited to the proposition that avoiding jeopardy and making progress toward recovery of listed fish facilitates the ability of the Upper Basin States to continue utilizing and further develop their Colorado River apportionments.

(R. 642 ¶97.b.).

If, as Protestants contend, the ROD requires base flows to remain undiverted in the Green River to satisfy the requirements of the Endangered Species Act, no one between Flaming Gorge and the confluence of the Green and Colorado rivers would be able to divert or use any water. (R. 643 ¶98). To the contrary, the ROD clearly anticipates further development of the water of the Green River and notes a target flow of 1300 cfs. *Id.* ¶99.

Utah has developed the "Utah Work Plan 2010" in conformity with the state's commitment to RIPRAP. Of the 4 million acre-feet at the Green River, Utah station, only 1.4 million acre-feet is released from Flaming Gorge Dam. The majority of flows at the Green River station, then, come from the tributaries to the Green River downstream from the

dam. (R. 643 ¶100). The Flaming Gorge releases have an impact, clearly, but make up much less than half of the available water at the Green River station. *Id.* ¶101.

The NRC has promulgated comprehensive regulations (Environmental Standard Review Plan, 5.2.1. Hydrologic Alterations and Plant Water Supply)(Tr. Ex. 51) with regard to the hydrologic alterations that a nuclear plant may cause, including minimizing any "adverse environmental impacts." *Id.* ¶102. The NRC Regulatory Guide 4.7, General Site Suitability Criteria for Nuclear Power Stations (Tr. Ex. 52), in conformance with NEPA, also outlines the comprehensive study to be undertaken by the NRC and the applicant. This process allows for public comment. See 10 C.F.R. Part 51 et seq. "Numerous public meetings...are held during the course of the reactor licensing process." (R. 643 ¶103.a., *quoting* "Nuclear Power Plant Licensing Process," at 2.[7]

The NEPA review includes analyses of impacts to air, water, animal life, vegetation, natural resources, and property of historic, archaeological, or architectural significance. *Id.* ¶103.b. Both of these regulatory guides call for close examination of the effect that the operation of the plant will have on the Green River, and specifically include the impact of the cooling system with regard to drift and its effect on the natural vegetation and crops in the vicinity of the Project site. *Id.* 643-44.

The review also evaluates cumulative economic, social, cultural, and other impacts and environmental justice. Accordingly, even if the State Engineer were to have expended the significant resources necessary to address Protestants' concerns by conducting further

[7] *See also* R. 643 n.2.

studies, the NRC and NEPA requirements are not optional, and cannot be circumvented by anything the State Engineer requires. (R. 644 ¶103.e.). Further, neither the State Engineer nor the district court is equipped to study cooling system design or drift. If Blue Castle is unable to comply with the requirements of the NRC, an Early Site Permit (ESP) will not issue. *Id.* ¶103.f.

Given the compulsory federal regulations and the burden of proof at this point in the proceedings under Utah law, it would be unnecessary and inappropriate for the district court to attempt to make a final determination of whether the Project will have any unreasonable effect on the natural stream environment. (R. 644 ¶104). Because of the comprehensive nature of the NRC review process, and the information presented at trial regarding the likely effect on the Green River and its biota, there is reason to believe that there will not be any unreasonable effect on the natural stream environment. *Id.* ¶105.

5. Economic feasibility

"The proposed plan is economically feasible." (R. 632).

Utah is the third fastest growing state in the United States, and its growth rate increased 23.8% between 2000 and 2010. (R. 632 ¶53)(Tr. Ex. 62)(Addendum 6). PacifiCorp, the parent company of Rocky Mountain Power, which produces the majority of electricity for the state of Utah, forecasts the growth in Utah will increase the load demand for electricity 1.2% per year between 2013 and 2020. *Id.* ¶54. The demand forecast takes into consideration increased efficiency and demand-side management, including steps to encourage the efficient use of electricity resources. *Id.* ¶55. Even with increased efficiency, the Governor forecasts a growth load between 2% and 2.4% per year. At that growth rate, by

2025, Utah will require 1,440 megawatts of new power beyond that currently produced in the state. By 2025, existing need and new growth load would require between 5,200 and 5,900 megawatts of electricity. *Id.* ¶55. a.-c.

PacifiCorp's 2013 Integrated Resources Plan (IRP) forecasts a shortage of 2,308 megawatts of electricity by 2022, which PacifiCorp indicates will be met largely by out of state wholesale market purchases. *Id.* ¶55.d. In 2012, the Governor adopted an energy policy for the state of Utah, and one part of that policy identifies an energy initiative challenging Utah power producers to construct 25% more generating capacity than the state requires for current power needs, for purposes of export. *Id.* ¶55.e. Problematically, in the 2011 IRP, PacifiCorp has not identified any new resources to meet the needs it projects, and forecasts importing electricity to the state as early as 2015. *Id.* ¶55.f.

Natural gas, although currently at an all-time low cost, suffers from similar environmental problems as coal, emitting carbon and contributing to visual pollution. (R. 633 ¶56). Further, natural gas producers are now beginning to export natural gas to foreign markets in the form of liquefied natural gas (LNG) which will likely cause the price of domestic natural gas to rise in the near future. *Id.* ¶57.

Solar and wind resources in Utah are de minimis at this time, primarily because of cost. *Id.* ¶58. Even assuming the cost of these renewable resources becomes more palatable because of the unavailability of coal generation or natural gas cost increases, neither such resource is suitable to produce base load power, that is, electricity available all the time. *Id.* ¶59. Solar power is available normally only about 4 to 5 hours in an average day. *Id.* ¶59.a. The technology to store wind or solar generated electricity is not available; there exists only

one pilot project for such storage on a commercial basis in the United States at this time. *Id.* ¶59.b. Nuclear power is ideal for base load power, produces no carbon or particulate emissions and does not result in visual pollution. *Id.* ¶60.

Blue Castle has had discussions with eighteen utilities expressing an interest in 4,500 megawatts of power. Based on Blue Castle's water rights, the Project could supply 2,200 to 3000 megawatts of power. *Id.* ¶61. Blue Castle established the cost-effectiveness of supplying nuclear power. *Id.* ¶62. Ninety-eight percent of Utah's electricity is currently generated by fossil fuel power plants. *Id.* ¶63. It is highly unlikely that any new coal plants will be constructed in Utah, or in the western region where the Project would likely serve. *Id.* ¶64. Should carbon capture and/or carbon tax regulations be enacted, it is further highly likely that the cost of generation of electricity by the remaining coal power plants and natural gas plants in the region will rise significantly. *Id.* ¶65.

Historically, the cost per megawatt hour of nuclear power has been comparable with coal and more predictable than natural gas, but the introduction of carbon capture legislation or carbon regulation will likely make nuclear power permanently competitive with these sources. This is because nuclear's production costs are lower than any other thermal resource, thus offsetting nuclear's higher capital costs. (R. 634 ¶66). Nuclear power generation is comparable to or less expensive per megawatt hour than solar or wind generation. Because there exists no proven method of storage for wind and solar, they are not feasible as base load power. *Id.* ¶67.

The price of natural gas, a multi-use fuel, is subject to price fluctuation, and is uncertain. Such fuel price fluctuation results in significant electricity price fluctuation. *Id.*

¶68. Nuclear generation is a consistent and stable base load power source, but has extremely high construction costs. Future cost projections show that the cost of nuclear power generated electricity is equivalent to or cheaper than other alternatives. *Id.* ¶69.

It is far from certain that Blue Castle will find partners to construct the nuclear plant itself, but Blue Castle's business plan shows the Project, if built, will eventually be profitable. *Id.* ¶70. Blue Castle is not required to have a business plan that is certain to succeed, but rather it is only required to establish that its plan is economically feasible. *Id.* ¶71. Blue Castle's goal at this point is to remove as much risk as possible during the licensing phase of the plant, to make the ultimate construction of a nuclear plant as attractive to utilities or other investors as possible. This approach is feasible and is consistent with current practices in the planning, construction and financing of nuclear plants. (R. 634 ¶71 a.-b.).

Even though there are high construction costs associated with a nuclear plant, at this point the district court concludes that there is reason to believe the Project is economically feasible once operational. *Id.* ¶72.

6. Financial ability to complete the proposed works

> **"<u>Blue Castle has the financial ability to complete the proposed works</u>."** (R. 636).

The total cost of the Project through build out is estimated $15 to $20 billion, and Blue Castle does not contend that it has the ability to accumulate that amount presently or on its own. (R. 636 ¶73). Blue Castle has a staged plan to build the Project and is proceeding under 10 C.F.R. Part 52. *Id.* ¶72. The cost of obtaining approval for an ESP from the NRC

is estimated to be in approximately $50 million. *Id.* ¶74.a. Blue Castle has raised (and spent) $17.5 million so far of the necessary capital to obtain the ESP. *Id.* ¶74.b.

Blue Castle has been working on the Project for over 6 years, and is on target in its development plan. *Id.* ¶74.c. Blue Castle has not borrowed any money at this point, and has met all of its financial obligations. *Id.* ¶74.d. It has conducted preparation, studies, and drafted strategic business plans. *Id.* ¶74.e. The Project is a phased process and Blue Castle is not required, at this stage, to have the entire project financed to completion. (R. 637 ¶*Id.* ¶74.f.).

The approach Blue Castle has adopted for the project (i.e., removing as much risk as possible in the early permitting process) makes it more likely that it will eventually find strategic partners to construct the power plant itself. (R. 637 ¶75). It is clear that financing for nuclear power is inherently risky and that funding is difficult and highly selective. However, this does not mean that the Project is impossible. Blue Castle has provided sufficient evidence that it is possible, and that there is reason to believe that the Project will be completed. *Id.* ¶76.

SUMMARY OF ARGUMENTS

Fatal defects in Protestants' brief allow this Court to assume that the record supports the district court's findings. It does, even without Protestants' unforced error. Their brief shoots at a target no longer meaningful to this case. That foundational defect aside, Protestants make no effort to marshal. That substantive defect establishes the facts in this fact-driven case.

Protestants, lead by an environmental group, identify three issues and fail to expose error on any of them. The district court's findings and conclusions exhibit a conscientious effort to get it right. On the question of unappropriated water, Protestants admitted a critical fact—that the Applications are already accounted for in the Colorado River Basin; they are not new appropriations. These already approved rights are being moved within the Basin to generate power without the carbon emissions that environmental groups usually detest.

Protestants were also faced with inconvenient facts on the issue of impact to the natural stream environment. Their expert had no opinion on whether or to what extent Project withdrawals might impact the endangered native fish. But he conceded that a little bit less water (56,000 af from a river that carries over 4 million af) is not and has never been the chief threat. Rather, their plight was caused by someone's bright idea to introduce competitive, aggressive, non-native species, which included mass poisoning of the native fish.

On the questions of economic feasibility and financial ability, Protestants miss the mark entirely. They argued the obvious with an un-pretended sense of discovery—that nuclear power is an expensive undertaking. It is. But that fact explains more about the Project than undermine it. Nuclear licensing in this Country is an exhaustive, lengthy proposition, and rightly so. Expensive and thorough environmental and other studies are necessary before this potent energy source is permitted.

Protestants urge an impossible requirement—that Blue Castle have billions in the bank now, before Project site approval. The federally established, phased development of nuclear power under 10 CFR Part 52 is designed specifically so that billions are not at risk

before the project gets to an early site permit. Blue Castle's financial plan is both sound and proven: Blue Castle is about half way through the early site permit process, with expenditures approaching $20 million, without borrowed funds. The experts who actually know something about the Project, and Utah energy issues, agreed that Blue Castle's plan is thoughtful, conservative and well within the norm for new nuclear development.

ARGUMENT

A. Protestants' Brief is fatally defective.

This appeal is afflicted by a "vexing and recurring problem": a brief that is "handicapped by inadequate compliance with the [Rules]." *State v. Green,* 2005 UT 9, ¶9. The rules "provide specific, step-by-step procedures for ...briefing...an appeal." *Id.* The requirements are "easy to understand," *MacKay v. Hardy,* 973 P.2d 941, 947 (Utah 1998), and mandatory. *Green*, ¶9.

Rule 24(a)(7) provides that "all statements of fact and references to the proceedings below shall be supported by citations to the record in accordance with paragraph (e) of this rule." This requirement applies with equal force to the argument. Specifically, Rule 24(a)(9) mandates that this portion of a brief assiduously cite to "the parts of the record relied on." Subdivision (e) in turn provides that "references shall be made to the pages of the original record as paginated pursuant to Rule 11(b)." Rule 24(e). Failure to comply is generally fatal.[8] Defective briefs "may be disregarded or stricken . . . ." Utah R. App. P.

[8] *See, MacKay,* 973 P. 2d at 949 (because "failure to comply with [the] rules hinders the judicial process," a brief that does not comply with Rule 24 will be stricken); *Child v. Gonda*, 972 P.2d 425, 430 (Utah 1998)(failure to cite to record violated Rule 24(a)(9),

24(k). Compliance is critical because this Court is not a "depository in which the appealing party may dump the burden of argument and research." *State v. Smith*, 2010 UT App. 231, ¶2, 238 P. 3d 1103 (citation omitted).

1. Protestants do not address the trial from which they claim to appeal.

Implicit in the appellate rules, if not common sense, is that a brief must address the issues and evidence at trial. The "record" referred to in appellate rule 24(a)(7) means the record of the trial resulting in the judgment from which the appeal is taken. Protestants stab at compliance, but ultimately their brief is just a cut and paste from a supplemental protest in a proceeding that had nothing to do with the trial. Along with the legal discussion, Protestants even lifted record cites from the informal administrative hearing (held in Green River) that preceded the trial. (*See, e.g.,* Brf at 36 (referring to "Green River Transcript"), 38, 41-45).

For example, during that administrative hearing, Applicants' counsel summarized, similar to a closing argument. Protestants argued in their Supplemental Appeal memo that counsel's statements should not be viewed as evidence. (Brf. at 42-43). Those statements are not evidence, of course. *State v. Redcap,* 2014 UT App 10, ¶32, 319 P.3d 1202. The point is that Protestants did not even bother to change the attack—the statements of "Mr.

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precluding appellate review); *Trees v. Lewis,* 738 P.2d 612 (Utah 1987) (dismissing appeal because appellant did "not support[ ] the facts set forth in his brief with citations to the record"); *Rappleye v. Rappleye,* 2004 UT App. 290 ¶¶22, 23, 99 P.3d 348 (declining to address arguments due to violations of Rule 24(a)(9)); *Steele v. Industrial Comm'n.,* 845 P.2d 960, 962 (Utah App. 1993) (court assumes correctness of the judgment "if a party fails to provide a statement of the facts along with a citation to the record where those facts are supported").

Wright" challenged in the brief were not made at trial. They were made at a hearing the result of which is not appealable to this Court. The trial *de novo* is the only relevant proceeding.[9]

The Court is directed to the "Conclusion" of Protestants' brief, where ordinarily it would expect to find "[a] short conclusion stating the precise relief sought." Rule 24(a)(10). It does that, but it seeks "relief" from the State Engineer, because it, too, is just a cut and paste from the Supplemental Protest.

B. Protestants fail to marshal the evidence.

"[A]n appellate court charged with interpreting the law," this Court does not "reassess the facts," *Salt Lake City Corp. v. Labor Comm'n.*, 2007 UT 4, ¶15, 153 P.3d 179, or "weigh the evidence de novo." *In re Estate of Bartell*, 776 P.2d 885, 886 (Utah 1989). Rather, the Court defers to the findings, "especially when they are based on an evaluation of conflicting live testimony." *Id.* at 886. Our appellate scaffolding rests on this express recognition of and dependence on the trial court's superior position relative to the evidence. Accordingly, "[f]indings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge the credibility of the witnesses." Utah R. Civ. P. 52(a).

This fundamental distinction between a trial and an appeal explains why "[a] party challenging a fact finding must first marshal all record evidence that supports the challenged

[9] "District courts have authority to review de novo any final agency action resulting from an informal administrative proceeding, including an action by the State Engineer." *Western Water v. Olds,* 2008 UT 18, ¶17, 184 P.3d 578.

finding." Utah R. App. P. 24(a)(9). *See also Alta Indus. v. Hurst*, 846 P.2d 1282, 1286 (Utah 1993) (appellant must "marshal all the evidence supporting the finding and then demonstrate that the evidence is legally insufficient to support the findings even viewing it in the light most favorable to the court below.")(internal quotation and citation omitted).

Marshaling provides the raw material needed to reach a legal conclusion whether that cumulative evidence supports the finding as a matter of law. If and only if the evidence does not support those findings can this Court find reversible error. That is, "[a] trial court's factual findings are clearly erroneous only if they are in conflict with the clear weight of the evidence, or if this court has a definite and firm conviction that a mistake has been made." *Bonnie & Hyde, Inc. v. Lynch,* 2013 UT App 153, ¶17, 305 P.3d 196 (quotations and citations omitted). That "clear weight of the evidence" cannot be measured without marshaling.

This Court is not shy about enforcing this "rigid requirement," *State v. Vigil*, 815 P.2d 1296, 1301 (Utah App. 1991), and shows "no reluctance to affirm" when an appellant shirks its marshaling duty. *West Valley City v. Majestic Inv. Co.*, 818 P.2d 1311, 1313 (Utah App. 1991). Marshaling means "every scrap of competent evidence introduced at trial which supports the very findings [Protestants] resist[]." *Traco Steel v. Comtrol,* 2007 UT App 407, ¶41, 175 P.3d 572 (citation omitted). As "a natural extension of an appellant's burden of persuasion," *State v. Nielsen*, 2014 UT 10, ¶41, "[w]hen a party challenging a factual finding fails to marshal . . . [this Court] assumes that the record supports the finding[]." *Uintah County v. Dept. of Workforce,* 2014 UT App 44, ¶7, 320 P.3d 1103 (citation omitted)(internal quotation marks omitted).

"Failure to marshal . . . waives an appellant's right to have his claim of insufficiency considered on appeal." *State v. Gallegos*, 851 P.2d 1185, 1189-90 (Utah App. 1993). And, "a party who fails to identify and deal with supportive evidence will never persuade an appellate court to reverse under the deferential standard of review that applies to such issues." *Nielsen*, ¶40. Protestants invite, and deserve, the same fate.

A few examples of Protestants' failure to marshal should suffice.

1. **Protestants fail to marshal on the district court's finding of unappropriated water.**

On the issue of water availability, *see* §73-3-8(1)(a)(i) ("unappropriated water in the proposed source"), Protestants make a number of unsupported factual statements while reasserting their theory of the case. (Brf. at 19-26). The thrust seems to be that the water rights on which the Applications are based have no "call" on Flaming Gorge Reservoir. Stipulated, but irrelevant. What Protestants miss is that the reservoir and its releases to the Green River are expressly intended to do two things—support endangered species with *recommended* minimum flows and allow Utah to develop its Colorado River allocation. (R. 642 ¶97.b.).

The Record of Decision for the Reoperation of Flaming Gorge Dam provides in relevant part:

> The Upper Colorado River Endangered Fish Recovery Program (Recovery Program) was developed in response to the request of Colorado, Wyoming, and Utah to facilitate the continued development of their Compact apportionments in light of Endangered Species Act concerns. The goal of the Recovery Program, therefore, is to recover the listed species of the Upper Colorado River to the point of de-listing, while allowing for the continued operation and development of the water resources of the Upper Colorado River Basin.

(R. 642 ¶97.b.; Tr. Ex. 20 at 5)

And further:

> The purpose of the proposed action is to operate Flaming Gorge Dam to protect and assist in recovery of the populations and designated critical habitat of the four endangered fishes, *while maintaining all authorized purposes of the Flaming Gorge Unit of the Colorado River Storage Project (CPSP) including those related to the development of water resources in accordance with the Colorado River Compact.*
>
> ...
>
> This action is limited to the proposition that avoiding jeopardy and making progress toward recovery of listed fish facilitates the ability of the Upper Basin States to continue utilizing and further develop their Colorado River apportionments.

Id. (emphasis added).

While Green River water users cannot dictate Flaming Gorge releases, its operation supports endangered species recovery, *i.e.* RIPRAP (R. 642 ¶95 b.-e.). *and* water development. (R. 642 ¶97 a.). Therefore, whatever this "legal restriction" is that Protestants contend applies to the Green River, it places no restriction on Utah's use of its Compact water.

Perhaps the most significant, but by far not the only, "scrap" of evidence on this issue is found in the Upper Basin Compact. How it came into evidence may explain why Protestants overlook it. Charles Norris was Protestants' water availability "expert." (R. 671 at 149-50). Although he did not know how much of its Colorado River allocation Utah uses (R. 671 at 169-70), he testified that, when quantifying that allocation, the Yampa River, a Green River tributary, does not count—it is reserved for lower Basin states, he says. *Id.* at 177-78. That notion of how the Compact works crumbled on cross:

> Subject to the provisions of this Compact, the rights to the consumptive use of the water of the Yampa River, a tributary entering the Green River in the State of Colorado, are hereby apportioned between the States of Colorado and Utah in accordance with the following principles:
>
> The State of Colorado will not cause the flow of the Yampa River at the Maybell Gaging Station to be depleted below an aggregate of 5,000,000 acre-feet for any period of ten consecutive years reckoned in continuing progressive series beginning with the first day of October next succeeding the ratification and approval of this Compact. In the event any diversion is made from the Yampa River or from tributaries entering the Yampa River above the Maybell Gaging Station for the benefit of any water use project in the State of Utah, then the gross amount of all such diversions for use in the State of Utah, less any returns from such diversions to the River above Maybell, shall be added to the actual flow at the Maybell Gaging Station to determine the total flow at the Maybell Gaging Station.

(R. 671 at 179, *quoting* Utah Code Ann. §73-13-10, Article XIII).

This section ensures Utah an annual average of 500,000 af from the Yampa alone. Utah's annual Colorado River allocation is 1.4 million af. (R. 623 ¶24). Far from exclusion, the Yampa provides fully one-third of Utah's entire share. That Protestants did not know this fact at trial is troubling; ignoring it here is fatal to the appeal on that issue. *Uintah County,* 2014 UT App 44, ¶7 (appellate court assumes the finding is correct when appellant fails to marshal).

Another un-marshaled scrap is the fact that Utah does not use its full Colorado River allocation. (R. 623 ¶¶24-25). Of its 1.4 million af share, Utah is not using approximately 400,000 af. *Id.*—almost its share of the Yampa, as it happens. And it is not expected to do so in the next six decades even under a fast growth scenario. (R. 623-24 ¶30). The district court's findings on this issue are further supported by Protestants' admissions—(1) the

"underlying water right[s]" are already approved but not developed, (2) approval here is not a "new appropriation of water . . . ." Rather, the Applications merely move the already approved diversion to the Green River. (R. 625 ¶38.c.). *See also* Tr. Ex. 47 at 3-4).

In other words, the water rights were already approved for diversion from the San Juan and Colorado Rivers. Approved Applications permits the same water to be diverted from the Green River, just upstream, but still in the Colorado system. "[T]he use of the Green River's water is regulated by the [Compact] and the [Upper Compact] . . . ." (R. 622 ¶21). This legal constraint required the district court to do exactly as it did—"first look at the appropriation on a system-wide basis." (R. 622). And, "like the State Engineer, the Court considere[d] all water tributary to the Colorado River Basin to be hydrologically connected." *Id.* Then, the district court "look[ed] at water availability in the Green River at the proposed point of diversion." *Id.*

Thus, when Protestants admitted that the underlying rights were not new appropriations, but are approved and not yet developed (R. 625 ¶38.c.), and that Application approval is not "a new appropriation . . . within the . . . Basin . . .," they conceded the central point. The Applications do not seek to draw *new* water from an over-developed basin. Rather, they move existing rights, already approved for power generation, to a different point of diversion. (R. 616 ¶¶3-6).

2. Protestants fail to distinguish between approved applications and beneficially used water.

A subtle issue pervades the district court's decision on unappropriated water. The district court found that, "[t]here is a difference between water for which an application to

appropriate has been made and approved and appropriated water, that is water actually put to beneficial use. Water can be approved for use under an application but that does not mean that the water is appropriated, that is, beneficially used." (R. 623 ¶25). The State Engineer explained that "over time, we've actually approved more applications for use in the Upper [Colorado River] Basin than Utah's [23%] allocation." (R. 669 at 271-72).

Utah is thus "over-appropriated, on paper, but . . . we're not using all of that water." *Id.* at 272. The Applications represent "already approved" rights and are "already a part of what we're accounting for in the Basin." *Id.* Except for "small" applications for single homes, the Colorado River Basin is closed to new appropriations (as opposed to change applications in which already approved rights are moved). (R. 669 at 272).

The district court's analysis gets to the same result but based on a different use of the term "appropriated." That term commonly describes water that is approved for use regardless of whether it is actually used.[10] That is what the State Engineer meant when he said "over-appropriated on paper." The district court determined that water is not "appropriated" until it is actually used. *See, e.g., Robinson v. Schoenfeld*, 218 P. 1041, 1043 (Utah 1923)("The *sine qua non* of making a valid appropriation is and was to apply the water attempted to be appropriated to some beneficial use."), *quoted in In re Uintah Basin,* 2006 UT 19, ¶29, 133 P.3d 410. The court ruled that, because Utah under-uses its river allocation (because there are approved applications under which water is not used)(Tr. Ex. 12; R. 623

[10] The Utah Division of Water Rights defines the term that way—"to initiate a water right by requesting and receiving permission to beneficially use public waters." *See* http://www.waterrights.utah.gov/wrinfo/glossary.asp

¶¶28-29), "the Upper Basin in Utah is not, in fact, over appropriated." (R. 623 ¶29). Under either characterization, it is undisputed that Utah uses much less water than it is entitled to. (R. 623 ¶27).[11]

3. Protestants fail to marshal on the issue of the natural stream environment.

a. Protestants make no argument concerning the district court's judgment.

Concerning the natural stream environment, Protestants do not address the district court's decision or its supporting evidence. The entire argument is essentially a cut and paste from their administrative hearing brief with no reference to the trial. (*Cf.* Brf at 26-31 and Supplemental Protest (Addendum 2) at 18-22). Bereft of anything that challenges the judgment on this issue, Protestants do exactly what our appellate courts warn against: Using this Court as a "depository" for "argument and research." *Smith*, 2010 UT App. 231, ¶2.

b. Protestants offered no evidence to undermine Applicants' evidence on this issue.

Searle explains the parties' relative burdens. 2006 UT 16. The applicant must establish a "reason to believe" that a given element under §73-3-8 is satisfied. *Searle,* ¶26. That "burden is satisfied if there is sufficient evidence to support a reasonable belief that the changes outlined in the application can be perfected without impairing vested rights." *Searle,*

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[11] Applicants (chiefly their lawyers) urge that this Court's opinion draw that distinction carefully. While on paper Utah is overappropriated in the Colorado River Basin, the Applications represent approved rights already being accounted for within the Basin. *See* R. 669 at 272-73.

¶46.[12] A protestant must then offer evidence to "undermine" that reason to believe. *Id.* ¶¶56-57.

The district court's analysis on this issue is thorough. (R. 640-44). The court summarized some of the Applicants' evidence.

> Testimony from Dr. Hardy, Applicants' expert, indicated that the depth necessary for the fish larvae and fry to survive and thrive was between 29 to 38 centimeters (i.e., approximately 11 to 14 inches). The evidence disclosed that with the proposed withdrawal for the Project, 99% of the time the flow rate of the river would exceed 700 cfs, and the change in depth would be less than 1.5 inches. 95% of the time, the flow rate would be above 1,300 cfs and the corresponding drop in river depth would be below 1 inch. There is no evidence that the proposed withdrawal would have an unreasonable impact on the natural stream environment.

(R. 641 ¶92).

To undermine Dr. Hardy, Protestants offered, sort of, the opinions of Dr. Harold Tyus. (R. 671 at 86). Although undoubtedly qualified, Dr. Tyus simply could not opine on this issue.

> Defendants' expert, Dr. Harold Tyus, testified that there would be an effect, but was unable to opine as to the extent of that effect without further research. Dr. Tyus testified that the surface area of the average backwater on the river may be reduced by as much as 50%, at times when the river depth would be decreased by over 1.5 inches. However, Dr. Tyus was unsure of the impact of the potential loss of this surface area on the fish population.

(R. 641 ¶91 a.b.).

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[12] Stated another way, "before application approval is warranted, it must be clear that the decisionmaker's determination that there is reason to believe is grounded in evidence sufficient to make that belief reasonable." *Searle*, ¶46.

Experts without opinions are not much use at trial. Tyus's concern was the native endangered species. But on cross he admitted that their endangerment has less to do with river flows and more to do with human introduced competition and piscicide. Tyus agreed that the native fish have endured many historically severe droughts. (R. 671 at 131-32). The real threat was "introductions of aggressive fishes to compete and to eat them . . . ." *Id.* at 132, 134.

> Q. [T]he introduction of the non-native fish into the Colorado River Basin, generally, and into the Green River. That's a significant problem for the native fishes, isn't it?
>
> A. Yes, Sir. It is.
>
> Q. Would you say that it is, perhaps, the most significant problem that's facing the fish right now?
>
> A. Well, I know some very well qualified ichthyologists that believe that we would not have endangered fish in the Colorado River today if we hadn't introduced non-native fishes into the system.

(R. 671 at 132-33).

Tyus conceded that human "management" of the rivers is punctuated by previous efforts to kill the native fish in favor of preferred game fish. In 1962, for example, rotenone, "a fish toxicant," (R. 671 at 133), was used in the Green River in an intended controlled effort. The poison "got away from them," resulting in a large fish kill:

> Q. The rotenone made its way down the river and killed quite a lot of fish.
>
> A. Yes. That's correct.

Id. at 134.

Tyus's concern was the aggressive non-native fish competition and historical ichthyicide, not Project water use—an issue on which he had no opinion. Protestants failed to provide evidence to "undermine" Applicants on this issue. Applicants demonstrated reason to believe, on the other hand, that Project withdrawals from the Green River are not a threat to those species. (R. 640 ¶¶87-92).

4. Protestants fail to marshal on the issue of financial ability.

a. Protestants make no argument concerning the district court's judgment.

Concerning financial ability, Protestants again do not address the district court's decision or the evidence. The entire argument is again lifted from the prior memorandum without reference to the trial. (*Cf.* Brf at 43-45 and Supplemental Protest (Addendum 1) at 35-36). On this issue as well, Protestants leave it to this Court to cull from the record "all relevant evidence . . . which tends to support the findings and demonstrate why the findings are clearly erroneous." *Timm v. Dewsnup*, 2003 UT 47, ¶24, 86 P.3d 699 (citations omitted).

Marshaling aside, Protestants barely articulate any challenge at all. Their brief aims at events not before this Court.

b. Given the nature and scope of the Project, Applicants satisfied their burden on the issue of financial ability.

Neither §73-3-8 nor the case law provide guidance on the precise meaning of "financial ability to complete the proposed works." But Utah has spoken sufficiently to this issue. An applicant is not required to spend project funds ahead of application approval. *Bullock v. Hanks,* 452 P.2d 866 (Utah 1969), where an applicant proposed to build a dam, explains that "no applicant should be required at the approval stage to expend the money to

design completely a dam" or otherwise "expend other substantial amounts of money" before approval. *Id.* at 868. "Such an expenditure is unmerited, since the application may be disapproved on some other ground, such as, nonavailability of water." *Id.* The court reasoned that the "opportunity to experiment" is essential to water development. *Id.*

With its similar water appropriation structure, Idaho supplies useful analysis on this element. Although different in certain particulars, Idaho's appropriation statute, I.C. 42-203A, includes a financial ability provision. In *Shokal v. Dunn*, 707 P.2d 441 (Idaho 1985), the court held that "[t]he financial ability criterion" does not require the applicant, "at the time of the hearings on the protested application, to have enough cash available to immediately complete the project." *Id.* at 446.

Unlike Utah, Idaho requires project completion within five years, but the applicant "must prove that it is reasonably probable that he can obtain the necessary financing to complete the project within [that time]." *Id.* A "then and there" cash requirement, the court explained, is "far too restrictive; such a standard may have an excessively chilling effect on water and land development . . . ." *Id.*

Idaho's implementation is both instructive and entirely consistent with long-held policy in Utah encouraging water development. *Searle* explains:

> [T]he [change application] procedure actually provides a balance between the two policy goals of putting water to the most beneficial use possible while simultaneously guarding vested rights. The procedure accomplishes this by placing a fairly low burden on a party seeking approval of a change application, thereby allowing the party to attempt to perfect the right to use the water in the manner contemplated by the application. If such use can be accomplished without interfering with vested rights, the policy of putting water to the best use possible is furthered without causing injury to anyone.

Searle, 2006 UT 16, ¶36. (citations omitted).[13]

The "proposed works," if all goes well, culminate in a power plant that could, by itself, supply nearly half the yearly power used in Utah without any carbon emissions. But those "works" are developed in stages under which Blue Castle eliminates or minimizes risk. (R. 673 ¶75). The district court explains:

> Blue Castle has a staged plan to build the Project and is proceeding under 10 CFR. Part 52. The cost of obtaining approval for an Early Site Permit (ESP) from the NRC is estimated to be approximately $50 million. Blue Castle has raised (and spent) $17.5 million so far of the necessary capital to obtain the ESP.

(R. 636 ¶74).

Phased development under 10 CFR Part 52 is designed to minimize risk. (*See generally,* R. 670 at 110-116). Dr. Nils Diaz, former chair of the United States Nuclear Regulatory Commission, and an NRC member for ten years (R. 670 at 100), explained:

> Part 52 is, really, designed to de-risk or [minimize] or reduce the risk of nuclear power plant construction by allowing you the almost certainty that you will be able to operate the plant if you build your plant and operate it in accordance with you[r] license. So, what i[t] does is you no longer have to start building your plant and getting approvals and, in between, investing the money without having a license. . . . You don't have to . . . go and find 16 billion dollars.
> While you are doing the process of de-risking your operation, you are, really, obtaining all the necessary approvals, not only federal, but state, local approvals to be able to do this project . . . .

---

[13] "By establishing this system, the legislature gave practical effect to its determination that the possible benefits to be derived from a liberal policy toward application approval outweigh the potential of possible temporary harm if a use proposed in an application results in an impairment of vested rights. The value of allowing experimentation cannot be understated." *Searle,* 2006 UT 16, ¶38 (citations omitted).

> I am not forced to a scale that says . . . I'm going to have to spend a billion dollars this year. It allows the applicant to set a schedule and a cost that actually fits their business model and allows the deployment of these very, very expensive assets in an orderly manner.

(R. 670 at 115-16).

Consistent with *Bullock,* the district court found: "The Project is a phased process and Blue Castle is not required, at this stage, to have the entire project financed to completion." (R. 637 ¶*Id.* ¶74.f.). The Project is approximately half-way through the early site permit process. (R. 669 at 17). Blue Castle has been working on the Project for over 6 years, and is on target in its development plan. (R. 636 ¶74.c.). It has financed the Project itself, without borrowed funds. *Id.* ¶74.d. "Blue Castle is well within the norms of the industry in terms of how the [ESP] application is being prepared." (R. 669 at 20).

5. Protestants fail to marshal on the issue of economic feasibility.

a. Protestants make no argument concerning the district court's judgment.

Concerning economic feasibility, Protestants again do not address the district court's decision. The entire argument is the same cut and paste without reference to the trial. (*Cf.* Brf at 42-43 and Supplemental Protest (Addendum 1) at 33-34).

b. Applicants satisfied their burden concerning economic feasibility.

City of Hildale v. Cooke, 2001 UT 56, 28 P.3d 697, addressed the meaning of economic feasibility in the context of condemned property—where the owner attempted to establish value based on proposed use. Economic feasibility turns primarily, and sensibly, on "sufficient demand for the potential use." *Id.* ¶24 (citations omitted). *See also League of*

Women Voters, Inc. v. U.S. Corps of Engineers, 730 F.2d 579, 582 (10th Cir. 1984)(economic feasibility is based on market demand or growth).

The evidence on this issue is compelling and comes from both sides of the energy equation: growing demand and the need for new, clean generation. In terms of demand, the district court found as follows:

> Utah is the third fastest growing state in the United States, and its growth rate increased 23.8% between 2000 and 2010. PacifiCorp, the parent company of Rocky Mountain Power, which produces the majority of electricity for the state of Utah, forecasts the growth in Utah will increase the load demand for electricity 1.2% per year between 2013 and 2020. The demand forecast takes into consideration increased efficiency and demand-side management, including steps to encourage the efficient use of electricity resources. Even with increased efficiency, the Governor forecasts a growth load between 2% and 2.4% per year. At that growth rate, by 2025 Utah will require 1,440 megawatts of new power beyond that currently produced in the state. By 2025, existing need and new growth load would require between 5,200 and 5,900 megawatts of electricity.

(R. 632 ¶¶52-55).

That is just Utah. Other fast growing states are nearby, geographically convenient for the sale and transmission of Utah power: Nevada (1st), Arizona (2nd), Idaho (4th) and Colorado (9th). (Tr. Ex. 62)(Addendum 6).

As for power generation, the outlook is grim due to increasing pressure on fossil fuels because of clean air and climate change issues, including in Utah. *See, e.g., Sierra Club v. Air Quality Bd.,* 2009 UT 76, 226 P.3d 719 (reversing in part approval order of coal fired power plant due to emissions control issues); and *Kennon v. Air Quality Bd.,* 2009 UT 77, ¶30, 270 P.3d 417 (reversing air quality board decision and holding that Utah's "enforcement rule, as approved by the EPA, must be interpreted to achieve the same goals as the [federal

program]. These goals include ensuring that a new emitting source is constructed with the most current control technology . . . ."). *See also Oklahoma v. U.S.*, 723 F.3d 1201 (10th Cir. 2013)(EPA has authority to reject state emissions plan in favor of more stringent national standards).

These ever-tightening restrictions have forced power developers to give up on new coal-fired generation. (R. 669 at 40-43). Existing local coal plants may soon be shuddered, *id.* at 44-48, further increasing the need for new generation. *Id.*[14] Protestants, headed by an environmental entity calling itself HEAL Utah, extolled the virtues of coal and natural gas because they are relatively cheap fuel sources. Based on Applicants' expert testimony, the district court found that:

> Natural gas, although currently at an all-time low cost, suffers from similar environmental problems as coal, emitting carbon and contributing to visual pollution. Further, natural gas producers are now beginning to export natural gas to foreign markets in the form of liquefied natural gas (LNG) which will likely cause the price of domestic natural gas to rise in the near future.

(R. 633 ¶56-57).

Blue Castle developed a working economic plan. (Tr. Ex. 60). Dr. Glenn George, a Harvard-trained economics and regulatory consultant (R. 669 at 95-96), testified that Blue Castle's plan is "a very standard kind of financial model that's done not just in the nuclear sector, but across the electric power sector . . . ." (R. 669 at 113-14). He evaluated the "reasonableness of the assumptions" *id.* at 115, and concluded, "measuring feasibility in

[14] "PacifiCorp has not identified any new resources to meet the needs it projects, and forecasts importing electricity to the state as early as 2015." (R. 632 ¶55.f.).

terms of abiding by the generally-accepted norms of financial planning and analysis, [Blue Castle's financial model (*id.* at 113-14)], clearly, falls within that range." *Id.* at 116.

Utah "allow[s] market forces to drive prudent use of energy resources, although incentives and other methods may be used to ensure the state's optimal development and use of energy resources in the short- and long-term . . . ." Utah Code Ann. §63M-4-301(1)(e).[15] The Western Interstate Nuclear Compact, *id.* §19-11-201, is intended to "[e]ncourage the development and use of nuclear energy, facilities, installations, and products as part of a balanced economy." *Id.* at Art. V, section (e).

Protestants focus on a single fact on this issue—nuclear power projects are expensive. If relative capital cost was the only test, then nuclear power could *never* get a Utah water right. Capital costs are not the only test, however, particularly when the issue is energy development. Protestants' expert conceded that nuclear power has lower production costs. (R. 671 at 63-64).[16]

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[15] Nuclear energy is included among "zero carbon emissions" generation, meaning "(a) . . . a generation facility located within the geographic boundary of the Western Electricity Coordinating Council that: (i) becomes operational on or after January 1, 2008; and (ii) does not produce carbon as a byproduct of the generation process; (b) includes generation powered by nuclear fuel; and (c) does not include renewable energy sources used to satisfy the requirement established under Subsection 54-17-602(1). Utah Code Ann. §54-17-601(8).

[16] Protestants' economic expert, Cooper (R. 671 at 5-6), was the unfortunate target of Applicants' rebuttal, where his methodology was demolished. Cooper failed to "normalize" his data. He compared "apples to oranges," *id.* at 199, inflating the difference by using statistical "outliers" to make nuclear look worse. *Id.* at 200-01.

C. *Protestants misapprehend the forthcoming environmental evaluation for the Project.*

Although less than clear, Protestants appear to argue from a false premise—that this case ends the environmental analysis that precedes NRC licensing. (Brf at 20-31). Not so. The entire NRC application process is subject to the National Environmental Policy Act (NEPA). (R. 641 ¶¶93-94, 103). NEPA's twin aims are "agency . . . obligation to consider every significant aspect of the environmental impact of a proposed action," and ensuring "that the agency will inform the public that it has indeed considered environmental concerns in its decisionmaking process." *Sierra Club v. U. S.*, 287 F.3d 1256, 1262 (10th Cir. 2002) (citations omitted).

Requiring "full consideration of environmental impacts," *Sierra Club v. Norton,* 207 F. Supp.2d 1310, 1338-1339 (S.D. Ala. 2002), NEPA's "sweep . . . is extraordinarily broad, compelling consideration of any and all types of environmental impact of federal action." *Environmental Defense Fund, Inc. v. Massey*, 986 F.2d 528, 536 (D.C. Cir. 1993)(citations omitted). Utah has an "affirmative obligation to comply with NEPA." *Utah State Rd. Comm'n v. Friberg*, 687 P.2d 821, 835 (Utah 1984).[17] NEPA requires federal and local collaboration, meaning federal cooperation "with State and local agencies to the fullest extent possible to reduce duplication . . . ." 40 C.F.R. §1506.2(b).[18]

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[17] NEPA has no substantive component; requiring only that its procedures be followed, not that a particular result is reached. See *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350-351 (1989).

[18] Trial Exhibit 53 is a primer on NRC licensing. (R. 670 at 136).

CONCLUSION

That electric power generation is a beneficial use of water is beyond question.[19] But this case is not, and must not be permitted to become, a referendum on nuclear power. The United States is already committed to nuclear power, producing more such energy than any other country.[20] Rather, the Applications invoke the same statutory criteria, and the same purposefully low burden of proof, as any other application because "[w]estern state governments are 'vitally interested in seeing that none of the [state's] waters are allowed to run to waste or go without being applied to a beneficial use.'" *Delta Canal Co. v. Frank Vincent Family Ranch, LLC*, 2013 UT 69, ¶19 (citation omitted).

The Project could bring clean power to the fastest growing part of the country at just the time when coal-powered energy is under fire and waning. The district court's meticulous catalog of the facts and its accurate application of the law are a model for doing it right. They remain unscathed after Protestants' half-hearted appellate effort. This Court should affirm.

December 23, 2014.

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[19] *See Pickett v. California Pac. Utils.*, 619 P.2d 325, 327 (Utah 1980) (citation omitted).
[20] New reactors were approved recently in Georgia and South Carolina, (R. 669 at 113), five new reactors in all. *Id.* at 155.

Rule 24(f)(1)(C) Certificate:

I certify that the foregoing brief complies with the type-volume limitations of Rule 24(f)(1)(A) of the Utah Rules of Appellate Procedure. According to the count provided by Microsoft Word, the brief contains 13,995 words.

David C. Wright

CERTIFICATE OF SERVICE

I certify that on December 23, 2014, two copies of the foregoing Brief of Appellees was delivered to the following by regular mail, postage prepaid.

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Addendum

1. Utah Code Ann. §73-3-8

2. Supplemental Protest

3. Findings of Fact, Conclusions of Law and Judgment

4. Trial Exhibit 17

5. Trial Exhibit 12

6. Trial Exhibit 62

Tab 1

TITLE 73 WATER AND IRRIGATION
CHAPTER 3 APPROPRIATION

73-3-8. Approval or rejection of application — Requirements for approval — Application for specified period of time — Filing of royalty contract for removal of salt or minerals.

(1)(a) It shall be the duty of the state engineer to approve an application if:

(i) there is unappropriated water in the proposed source;

(ii) the proposed use will not impair existing rights or interfere with the more beneficial use of the water;

(iii) the proposed plan is physically and economically feasible, unless the application is filed by the United States Bureau of Reclamation, and would not prove detrimental to the public welfare;

(iv) the applicant has the financial ability to complete the proposed works; and

(v) the application was filed in good faith and not for purposes of speculation or monopoly.

(b)(i) If the state engineer, because of information in the state engineer's possession obtained either by the state engineer's own investigation or otherwise, has reason to believe that an application to appropriate water will interfere with its more beneficial use for irrigation, domestic or culinary, stock watering, power or mining development, or manufacturing, or will unreasonably affect public recreation or the natural stream environment, or will prove detrimental to the public welfare, it is the state engineer's duty to withhold approval or rejection of the application until the state engineer has investigated the matter.

(ii) If an application does not meet the requirements of this section, it shall be rejected.

(2)(a) An application to appropriate water for industrial, power, mining development, manufacturing purposes, agriculture, or municipal purposes may be approved for a specific and certain period from the time the water is placed to beneficial use under the application, but in no event may an application be granted for a period of time less than that ordinarily needed to satisfy the essential and primary purpose of the application or until the water is no longer available as determined by the state engineer.

(b) At the expiration of the period fixed by the state engineer the water shall revert to the public and is subject to appropriation as provided by this title.

(c) No later than 60 calendar days before the expiration date of the fixed time period, the state engineer shall send notice by mail or by any form of electronic communication through which receipt is verifiable, to the applicant of record.

(d) Except as provided by Subsection (2)(e), the state engineer may extend any limited water right upon a showing that:

(i) the essential purpose of the original application has not been satisfied;

(ii) the need for an extension is not the result of any default or neglect by the applicant; and

(iii) the water is still available.

(e) No extension shall exceed the time necessary to satisfy the primary purpose of the original application.

(f) A request for extension of the fixed time period must be filed in writing in the office of the state engineer on or before the expiration date of the application.

(3)(a) Before the approval of any application for the appropriation of water from navigable lakes or streams of the state that contemplates the recovery of salts and other minerals therefrom by precipitation or otherwise, the applicant shall file with the state engineer a copy of a contract for the payment of royalties to the state.

(b) The approval of an application shall be revoked in the event of the failure of the applicant to comply with terms of the royalty contract.

Tab 2

Original to electronic copy Received 3/11/2010 KH

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TIMELY

BEFORE THE OFFICE OF THE UTAH STATE ENGINEER
UTAH DIVISION OF WATER RIGHTS

In the Matter of Change Application a35402 (89-1285, 89-1513, 89-74) filed by Kane County Water Conservancy District; and In the Matter of Change Application a35874 (09-462) filed by San Juan County Water Conservancy District	**SUPPLEMENT TO PROTEST OF HEAL UTAH AND BILL AND JUNE ADAMS**

The Healthy Environment Alliance of Utah ("HEAL Utah") and Bill and June Adams (collectively referred to as the "Protestants") respectfully submit this Supplement to Protest in the pending administrative proceedings concerning the above referenced change applications. This supplement is filed pursuant to the State Engineer's decision to leave the record open through March 1, 2010. Because the two change applications were consolidated into one administrative hearing and seek approval of the same nature and place of use (for the operation

of a nuclear power plant ostensibly to be permitted and constructed by Blue Castle Holdings), the issues relating to each application are sufficiently similar to allow both to be addressed in one document (the subject change applications are therefore collectively referred to herein as the "Change Applications"). Furthermore, the parties to the applications include the owners of the water rights: Kane County Water Conservancy District and San Juan County Water Conservancy District, as well as the lessee of the water rights Blue Castle Holdings. All three parties are referred to herein as the "Applicants." Protestants request that copies of this Supplement to Protest be placed in the files for each change application.

I.

INTRODUCTION

The Change Applications seek approval to change the point of diversion and place of use of 53,600 acre feet of water originally appropriated as part of Utah's allocation of Colorado River Water under the Colorado River Compact. By itself, the quantity of water alone merits careful investigation and scrutiny by the State Engineer pursuant to his statutory duties under Utah Code §§ 73-3-3 and 73-3-8. *See Bonham v. Morgan,* 788 P.2d 497, 502 (Utah 1989), (holding that the criteria set forth in Section 73-3-8 apply equally to the State Engineer's review of change applications pursuant to § 73-3-3). However, the changes in point of diversion and nature of use sought under the Change Applications raise serious issues under each of the *Bonham* criteria. Those issues have already been raised in protests filed in connection with these proceedings and invoke the State Engineer's duty to investigate under Utah Code Ann. § 73-3-8.

That section provides:

> If the state engineer, **because of information** in the state engineer's possession obtained either by the state engineer's own investigation or otherwise, **has reason to believe** that an application to appropriate water will interfere with its more beneficial use for irrigation, domestic or culinary, stock watering, power or mining development, or manufacturing, or will unreasonably affect public recreation or the natural stream environment, or will prove detrimental to the public welfare, **it is the state engineer's duty to withhold approval or rejection of the application until the state engineer has investigated the matter.**

Utah Code Ann. § 73-3-8 (1)(b)(i) (emphasis added). *See also Badger v. Brooklyn Canal Company,* 922 P.2d 745 (Utah 1996); and *Badger v. Brooklyn Canal Company*, 966 P.2d 844 (Utah 1998).

This Supplement to Protest addresses each of the statutory factors under the Change Applications upon which the State Engineer must base its decision pursuant to the requirements of Utah Code Ann. § 73-3-8. *See Badger*, 922 P.2d at 750 (stating that "the jurisdiction of the State Engineer's office is thus circumscribed by the criteria upon which the statute permits it to base its decisions" *citing* Utah Code Ann. § 73-3-8(i)). Based on that information, Applicant has not, and cannot, satisfy its burden of demonstrating that the Change Applications meet the requirements of Section 73-3-3 and 73-3-8. As a result, the Change Applications must be denied. *See Id.* at fn. 10 (*finding* that "the State Engineer has a duty to withhold approval if it appears there is reason to believe that the enumerated requirements have not been met, and ultimately to deny the application if further investigation more conclusively reveals the same").

II.

DESCRIPTION OF THE PROTESTANTS AND INTEREST

1. HEAL Utah is a public interest group that advocates on nuclear power, nuclear waste and environmental issues. The group is comprised of many individual members, including Bill and June Adams and, Tim Vetere, and other individuals on behalf of whom it advocates, residing in and around Green River, Utah. These members are also owners of vested water rights who have an interest in the Change Applications that directly relate to the State Engineer review criteria and are inextricably tied to the construction and operation of the proposed nuclear power facility.

2. Bill and June Adams, in addition to being members of HEAL Utah, own water rights that authorize diversion of water directly from the Green River. Specifically, the Adams own Water Right Number 91-334 approved in 1953 and certificated on March 24, 1974, allowing for the diversion of 3.6 cfs of water from the Green River for irrigation and domestic uses within the E1/2 of the SW1/4 of Section 9, Township 1 South, Range 16 East. The Adams also own Water Right Number 91-3782, which is a diligence right with a priority of 1869 that authorizes stock watering directly from the Green River in Section 9, Township 1 South, Range 20 East.

III.

ISSUES AND FACTS RELATING TO STATE ENGINEER REVIEW CRITERIA

The Utah Legislature has established a clearly defined process governing the appropriation and change of water rights that specifically enumerates the issues that must be considered by the State Engineer in reviewing those applications. Pursuant to the relevant statutory sections, the State Engineer's decision requires consideration of the following factors and issues:

(1) (a) It shall be the duty of the state engineer to approve an application if:
- (i) there is unappropriated water in the proposed source;
- (ii) the proposed use will not impair existing rights or interfere with the more beneficial use of the water;
- (iii) the proposed plan is physically and economically feasible, unless the application is filed by the United States Bureau of Reclamation, and would not prove detrimental to the public welfare;
- (iv) the applicant has the financial ability to complete the proposed works; and
- (v) the application was filed in good faith and not for purposes of speculation or monopoly.

(b)(i) If the state engineer, because of information in the state engineer's possession obtained either by the state engineer's own investigation or otherwise, has reason to believe that an application to appropriate water will interfere with its more beneficial use for irrigation, domestic or culinary, stock watering, power or mining development, or manufacturing, or will unreasonably affect public recreation or the natural stream environment, or will prove detrimental to the public welfare, it is the state engineer's duty to withhold approval or rejection of the application until the state engineer has investigated the matter.

Utah Code Ann. § 73-3-8. The State Engineer has a duty to reject the Change Application if any of the statutory requirements have not been met. *Id.*

The State Engineer must also consider the impacts of the proposed Change Application on the vested rights of other water users. Specifically, Section 73-3-3 provides:

> (2) (a) Any person entitled to the use of water may make permanent or temporary changes in the:
> (i) point of diversion;
> (ii) place of use; or
> (iii) purpose of use for which the water was originally appropriated.
>
> (b) Except as provided by Section **73-3-30**, a change **may not be made** if it impairs a vested water right without just compensation.

Utah Code Ann. § 73-3-3(2) (emphasis added).

At the hearing, Applicants presented information intended to demonstrate that the Change Applications meet each of the required statutory elements for approval. *See* Transcript of State Engineer Change Application Hearing, dated January 12, 2010 *("Green River Transcript")* at pp. 6-85. Unfortunately, Applicants' presentation ignored many of the material issues relating to those criteria and failed to properly analyze the detrimental impacts of the proposed change. Analyzed individually, it is clear that the Change Applications cannot be approved under the statutory requirements and pursuant decided case law.

A. Section 73-3-8(1)(a)(i): There is Unappropriated Water in the Proposed Source.

Utah Code § 73-3-3(1)(a) requires a finding by the State Engineer that there is unappropriated water in the proposed source of supply. The Change Applications propose to change the points of diversion of the underlying water rights from sources located many miles

downstream to points on the Green River. This requested change in location presents significant factual and legal issues relating to the Green River water supply that must be overcome to meet statutory requirements.

The water rights underlying the Change Applications are based on appropriations made in the 1960s from Utah's allocation of Colorado River water under the Colorado River Compact. The source of supply for each of the underlying water rights is historically based on flows other than those coming from the Green River. The San Juan County Water Conservancy District water was appropriated from waters flowing in the San Juan River. The historical points of diversion under the Kane County water rights were based primarily on waters flowing from the main stem of the Colorado River into Lake Powell. Accordingly, Green River flows contributed to only a minority portion of those rights.

The points of diversion listed on the Change Applications place full reliance on flows of the Green River to satisfy the proposed diversion requirements. This means that the Change Applications, if approved, will authorize the diversion and use of water from the river despite the fact that the underlying water rights are not historically appurtenant to the river. Accordingly, in addition to the requirement in Utah Code Ann. § 73-3-3(5)(a) directing that the State Engineer follow the same procedures as provided for in the appropriations statute, the unique factual circumstances present here dictate that the State Engineer specifically address the availability of unappropriated water supply.

The State Engineer has already determined that the Colorado River Basin is over-appropriated. The Green River is included within that river basin. The State Engineer decision

finding over-appropriation is reflected in his "Memorandum Of Water Appropriation Policy Colorado River Drainage." That policy recognizes that the only water available for appropriation in large quantities is water that is based on Colorado River flows allocated to Utah under the Compact.[1]

Recognizing this restriction, Applicants seek to meet the requirements imposed under the State Engineer's prior policy decision by arguing that the water rights underlying the Change Applications meet the criteria without factually substantiating their claim. A careful review of the waters and water rights that make up the Green River system clearly illustrates that there is no unappropriated Colorado River water upon which to base an approval of the Change Applications.

1. Applicants Improperly Rely on Instream Flow Releases from Flaming Gorge Reservoir, Specifically Calculated to Meet the Requirements of the Endangered Species Act, as the Basis for Claiming Unappropriated Water.

Flows in the Green River are controlled by the Flaming Gorge Reservoir Operating Plan. Under the recently approved plan, no releases from the reservoir are authorized during periods of low flow except for flows designated as minimum instream flows under the Endangered Species Act Biological Opinion and subsequent studies. Although the Change Application water rights are technically derived from Utah's Colorado River allocation, they are based on flows in the

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[1] Applicants' water rights expert, Jerry Olds, acknowledges in his testimony that the Green River is already over- appropriated. Addressing the water rights already approved under Utah's Colorado River Compact allocation, he states:

> So on paper, the basin, **the Upper Colorado River Basin is over-appropriated**, but still as a state we've struggled to put all of our entitlement to use.

Green River Transcript at 70:18-21 (emphasis added).

main stem of the Colorado River and are **not** storage rights that have a call for releases from Flaming Gorge Dam. Accordingly, the water rights upon which the Change Applications are based do not meet the requirements of the State Engineer Policy.

Applicants cannot overcome the burden of showing unappropriated water in the Green River either through a challenge to the State Engineer finding that the river is fully appropriated or by attempting to demonstrate that the flows in the river at the proposed points of diversion are legally available for appropriation. Under either theory, Applicants have the burden of presenting evidence to the State Engineer that establishes a reason to believe that there is unappropriated water in the source. *See Searle v. Milburn Irr. Co.*, 2006 Utah 16, 133 P.3d 382. Given the finding of over-appropriation contained in the State Engineer's existing policy, and applying the burden of proof plainly enunciated in *Searle*, Applicants must demonstrate that there is Colorado River water flowing in the Green River at the proposed point of diversion that is not subject to prior appropriation or other legal restriction. That evidence must overcome the State Engineer's established finding of over-appropriation.

2. The Expert Testimony Presented by Applicants in Support of the Change Applications is Insufficient to Establish a Reason to Believe There Is Unappropriated Water.

The expert testimony presented by Applicants at the January 12, 2010 hearing, and relied upon in support of the Change Applications, fails to meet the burden required under *Searle*. Contrary to that testimony, there is no unappropriated water in the source upon which that State Engineer could properly base approval of the Change Applications.

a. THE WATER RELEASED FROM FLAMING GORGE RESERVOIR IS NOT AVAILABLE FOR APPROPRIATION AND CANNOT FORM THE BASIS FOR APPROVAL OF THE CHANGE APPLICATIONS UNDER THE STATUTORY REQUIREMENTS OF SECTION 73-3-8(1)(A).

At the hearing, Jerry Olds, P.E., presented expert testimony concluding that there is unappropriated water in the Green River. *See Green River Transcript* at 80:5-7. Mr. Olds' expert opinion is based on flow records made at the USGS gaging station located above the Town of Green River. *Id.* at 74:24 to 75:2. Mr. Olds concludes that those flow measurements unilaterally demonstrate unappropriated water flowing in the river during all periods necessary to satisfy the diversions requirements of the Change Applications. *Id.* at pp. 67-85.

The nature of the proposed use under the Change Applications requires that water be available on a year-round basis in order to meet the requirements of the Nuclear Regulatory Commission for cooling the nuclear reactor.[2] *Id.* at 72:19 to 74:23.[3] For purposes of demonstrating unappropriated water in the source, this physical and regulatory requirements demand sufficient water in the river at low flow to satisfy the full diversion requirements of the water rights. Applicants testified at the hearing that the year-round flow requirements of the

[2] Unless the water rights covered by the Change Applications fully meet the established requirements for NRC permitting, the applications are speculative and cannot be approved under the requirements of Utah Code Ann. § 73-3-8 (1)(a)(iv) and (v). Those criteria are addressed in detail in section D, below.

[3] "With nuclear power plants, they are basically base load facilities, so there's generally very constant power production that equates to a constant water demand for the plant. *Green River Transcript* at 73:24 to 74:2. Mr. Nils Diaz, former NRC Chairman and expert for Applicants testified when asked if the proposed plant could shut off water diversions: "That will not happen. You will not cut off completely a power plant from water." *Id.* at 116:18-19

proposed use are a minimum of 70 cfs. *Id.* As a result, that water must be available, regardless of priority cuts, to satisfy the requirements of Section 78-3-3.[4]

Focusing on low flow measurements -- the data points necessary to determine the availability of unappropriated water in the river -- Mr. Olds concludes that there is at least 700 cfs of water flowing in the Green River near the proposed point of diversion. *Green River Transcript* at 79:20-24.[5] To arrive at his conclusion, Mr. Olds necessarily includes the flows released from Flaming Gorge Dam under the Operating Plan as the basis for his opinion that there is unappropriated water in the source. Under the Operating Plan, the base flow target at Jensen, Utah, is between 900 cfs and 1,100 cfs during dry years (low flow periods). *See* Operation of Flaming Gorge Dam, Final Environmental Impact Statement (September 2005) ("*Operating Plan*") at Table 2.6. Accordingly, those releases account for more than all of the flows identified by Mr. Olds as available for appropriation even in low flow years.

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[4] Mr. Olds' testimony on this point is contradictory. At one point during his testimony on the record, Mr. Olds uses low flow records as the correct standard for determining unappropriated water: "The problem then becomes the low years, and again I think those are the ones that you have to manage for". *Id.* at 79:2-4. However, conceding that there are may documented periods over the past 110 years in which there is a limited availability of water supply, Mr. Olds' attempts to dismiss the lack of consistently available water under Utah's Colorado River Compact allocation, stating:

> In looking at the water supply within the Colorado River Basin, there is no doubt it has experienced significant wet and dry cycles in the past, and it probably will continue to experience those into the future. Predicting what the future water supplies will be is difficult, but again, I think the historical record gives us a base of what we've seen, will probably see in the future as well. The thing that gives me comfort though as a look at perhaps shortages into the future or whatever, Utah water law is based on doctrine of prior appropriation, and I think it is a very sound and it is designed to distribute water by priority during times of shortages. And even though it won't be easy to do it, I think the institutional mechanism by which to deal with those types of issues is already in place.

Id. at 72:2-18.

[5] Mr. Olds testified: "If you look at the seven-day, low-flow period -- it is here at the end of August, first of September -- and the average flow during that seven-day period was just over 700 cubic feet per second." *Green River Transcript* at 79:20-24.

Although Mr. Olds' expert opinion appears to substantiate Applicants' claims to unappropriated water, that opinion is fundamentally flawed because it completely disregards the legal status of the waters released from Flaming Gorge Reservoir and the unavailability of such water for appropriation.[6] Viewed within the legal framework governing those releases, Mr. Olds' testimony actually establishes that there is no unappropriated water upon which approval of the Change Applications can be based.

i. Legal Framework:

The releases mandated under the Operating Plan are required to satisfy the requirements of the Endangered Species Act established to protect critical habitat and recover endangered fish. *See Record of Decision* at p. 6.[7] *See also Operating Plan;* 7 U.S.C. § 136, 16 U.S.C. § 1531 et

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[6] Addressing a question on this very point, Mr. Olds' answers: "With regard to the reoperation of Flaming Gorge Reservoir, no, I did not analyze how it would affect the flows and so forth." *Green River Transcript* at 122:2-5. Mr. Olds' testimony is also flawed because it is based on a 30-year record and the preceding statement substantiates that he also did not include in his consideration the fact that Reach 3 (Green River Model) flows are generally lower under the Operating Plan than the flows under prior operation of the dam:

> "Overall, the base flows in Reach 3 that will occur if Flaming Gorge Dam is operated under the Action and No Action Alternatives will be similar. In general, the base flows under the Action Alternative will be slightly lower than those of the No Action Alternative as shown in figure 4 . . . Reach 3 flows during the summer months including late July, August and September will most likely see flows under the No Action Alternative that are lower than those of the Action Alternative by 300 to 700 cfs."

Operating Plan, Appendix 2 at App-84.

[7] The *Record of Decision* states: Implementation of the Recovery Program's 2000 Flow and Temperature Recommendations, in concert with other Recovery Program actions, **is intended to avoid jeopardy and assist in recovery**. By implementing the 2000 Flow and Temperature Recommendations, Reclamation is taking the steps necessary **to avoid jeopardizing the continued existence of the endangered species from the operation of Flaming Gorge Dam** and to voluntarily and cooperatively take steps to facilitate recovery of the fish, which, in turn, will support the continued and further utilization of the Federal facilities to aid in the development of the states' Compact apportionments.

Record of Decision at p. 6 (emphasis added).

seq.[8] The target flows contained within the Operating Plan are largely the result of cooperative agreements among the State of Utah, U.S. Bureau of Reclamation, and U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act.[9] *See Record of Decision* at page 2, Section III.[10] *See also Cooperative Agreement,* signed January 22, 1988.[11]

Those agreements, and the findings supporting the flow and temperature targets for the releases required under the Operating Plan, clearly establish that water released from Flaming Gorge Reservoir to meet target flows and temperatures is not available for appropriation. The releases are specifically calculated to meet flow and temperature targets for all three reaches of the system. *See Flow and Temperature Recommendations for Endangered Fishes in the Green*

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[8] The "Proposed Federal Action and Background" of the Operating Plan states: "The Bureau of Reclamation proposes to take action to protect and assist in recovery of the populations and designated critical habitat of the four endangered fishes found in the Green and Colorado River Basins (proposed action) . . . The recommended flows and temperatures are intended to provide water releases of sufficient magnitude and, with the proper timing and duration, to assist in the recovery of the endangered fishes and their designated critical habitat." *Operating Plan* at 1.0.

[9] Section 1.2 of the Operating Plan lists the agencies participating in the EIS:

> Reclamation is the lead agency in preparing this environmental impact statement (EIS). The eight cooperating agencies include the Bureau of Indian Affairs, Bureau of Land Management (BLM), National Park Service, **State of Utah Department of Natural Resources**, U.S. Fish and Wildlife Service, United States Department of Agriculture Forest Service (USDA Forest Service), Utah Associated Municipal Power Systems, and Western Area Power Administration (Western).

Operating Plan at 1.2 (emphasis added).

[10] Section 7 of the Endangered Species Act directs all Federal agencies to use their existing authorities to conserve threatened and endangered species and, in consultation with the Service, to ensure that their actions do not jeopardize listed species or destroy or adversely modify critical habitat. Section 7 applies to management of Federal lands as well as other Federal actions that may affect listed species, such as Federal approval of private activities through the issuance of Federal permits, licenses, or other actions, including operation of Flaming Gorge Reservoir under state water rights.

[11] Agreement creating the Upper Colorado River Endangered Fish Recovery Program.

River Downstream of Flaming Gorge Dam (2000 Flow and Temperature Recommendations). *See also Operating Plan*, Appendix 2; *Record of Decision*, dated February 16, 2006.[12]

ii. Implementation.

The 2000 Flow and Temperature Recommendations are specifically designed to protect designated critical habitat and recover endangered species in the Green River. *Id. See also* U.S.C § 1533(b)(5)(A)-(E). The Operating Plan incorporates the 2000 Flow and Temperature Recommendations and includes all three reaches of the Green River. Accordingly, all releases from Flaming Gorge Reservoir are intended to be left in the river undiverted from the point of release to Lake Powell in order to maintain and restore designated critical habitat. *Operating Plan*, 1.1, Appendix 2. Those expectations have been reaffirmed in letters recently submitted in these administrative proceedings by the United States Fish and Wildlife Service and Utah Division of Water Resources.[13]

In its January 14, 2010 letter, the U.S. Fish and Wildlife Service specifically referenced the conservation agreement to which the State of Utah is a party and clearly states that the diversions contemplated under the Change Applications would undermine the agreement and threaten the

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[12] The Record of Decision states: "Under the Action Alternative, releases from Flaming Gorge Dam would be patterned so that the peak flows, durations, and base flows and temperatures, described in the 2000 Flow and Temperature Recommendations for of **Reaches 1, 2, and 3 the Green River**, would be achieved to the extent possible. *Record of Decision*, page 3 (emphasis added). Reach 3 is defined in the Record of Decision as: Reach 3 begins at the confluence of the Green and White Rivers and extends 246 river miles south to the confluence of the Green and Colorado Rivers in Canyonlands National Park at the boundary of Wayne and San Juan Counties in southeastern Utah. In this reach, the Green River is further influenced by tributary flows from the White, Duchesne, Price, and San Rafael Rivers. *Id.*

[13] The recognized tension between water development and species protection and recovery is part of the Congressional findings contained in Section 2 of the Endangered Species Act. Those findings recognize that the Act is designed to protect critically imperiled species from extinction as a "consequence of economic growth and development untempered by adequate concern and conservation".

endangered species through all reaches of the Green River ecosystem. Similarly, the Utah Division of Natural Resources expresses its concerns about the potential impacts of the Change Applications and reaffirms that Utah's legal right to use the water under the Colorado River Compact is subject to the requirements of the Endangered Species Act, which requirements specifically include the releases to meet target flows from Flaming Gorge Reservoir. *See* U.S.C 1533(b)(5)(A)-(E). The Division of Water Resources also urges that any decision on the Change Applications be deferred until the ongoing study being conducted by the Bureau of Reclamation is completed. Both letters refer to the consequences of a Jeopardy Opinion that may result from approval of the Change Applications and the attendant consequence of such action. Copies of the referenced letters are contained within the Change Application Water Rights files. Additional documents relating to the flow requirements of the Endangered Species Act and providing a historical background of cooperation culminating in the Operating Plan, are contained in the referenced public documents prepared in conjunction with the Section 7 consultation.[14]

B. Section 73-3-3(2)(b): No Impairment of a Vested Water Right Without Just Compensation; Section 73-3-8(1)(a)(ii): The Proposed Use Will Not Impair Existing Rights.

Utah Code Ann. § 73-3-3(2)(b) requires the State Engineer to reject a change application if it impairs a vested water right without just compensation, and Utah Code An. § 73-3-8(1)(a)(ii)

[14] The Operating Plan and related documents, because of length, are not included with this supplement. Copies of the document are already contained within the records of the Utah Division of Water Rights and are specifically incorporated herein by reference. The Operating Agreement may also be obtained at: http://www.usbr.gov/uc/provo/rm/fgeis/fgeis_index.html.

requires that the proposed use will not impair existing rights. Both of these review criteria apply to the Change Applications.

1. If Approved, The Change Applications Will Impair The Vested Rights Of Protestants And Other Water Right Owners That Rely On Diversions From The Green River.

At the hearing, several water right owners provided testimony to the State Engineer regarding the flows available in the Green River near to and below the proposed point of diversion. *See e.g. Green River Transcript*, pages 187-9, 218-220. In many areas of the river, owners of senior vested water rights already have difficulty obtaining water at their approved points of diversion. In these instances, the owners of the water rights have reconstructed intakes and lowered diversion pumps in the river to provide sufficient depth for the pumps to operate and divert water. At times, even these proactive measures are insufficient for the water right owners to obtain their full measure of water supply.[15]

The Change Applications seek to divert an additional 53,600 acre feet of water from a system that is over-appropriated and not presently capable, during certain periods, of satisfying early priority water rights. The significant withdrawal of water proposed by Applicants will directly interfere with and impair the rights of those vested water right holders. Statements from the owners of water rights that are members of HEAL Utah and parties to these proceedings, are

[15] Jerry Olds' testimony reads: "And I should add that 2002 is lowest year in the hundred-plus years of record. The only year lower was 1934, and so it's extremely dry, 2002. **I think there's a number of water users in this room that remember the problems they had just getting water out of the river here**." *Green River Transcript at* 77:19-23. "The problem then becomes the low years, and again I think those are the ones that you have to manage for. This happens to be the low year, 2002 . . ." *Green River Transcript at* 79:2-4.

attached hereto as Exhibit "A". Those statements document the current river conditions at their points of diversion, substantial efforts that have been made to maintain water supply under their rights, and financial stakes threatened by the Change Applications.

2. The Proposed Nature Of Use Requiring a Firm Supply of Water Will Interfere with the Rights of Protestants and Other Water Right Owners.

In addition to the impairment of water rights located in close proximity to, and downstream of, the proposed points of diversion, the relatively late priority underlying water rights and continuous flow requirements of the hereafter nature of use, will also impact upstream water right holders. That impairment of rights will be the direct result of flow bypasses imposed on senior water rights to satisfy the cooling requirements of the proposed nuclear facility.

As conceded by Applicant at the hearing, the cooling requirements of the plant are continuous and year-round. *See infra*, fn. 2, fn. 3. In order for the plant to operate safely, the full measure of water supply requested by the Change Applications is required at the point of diversion, regardless of river conditions or priority cuts. A nuclear power plant cannot safely operate without the water upon which it depends for cooling. *Id.* Accordingly, the over-riding public safety concerns relating to a nuclear reactor core will necessitate the bypassing of flows by upstream water right holders. In periods of low flow or priority cut, water would necessarily be released from upstream diversions to ensure sufficient supply at the Applicant's point of diversion and continued cooling of the reactor core. *Id.*

C. Section 73-3-8(1(a)(ii): The Proposed Use Will not Interfere with the More Beneficial Use of the Water; or Section 73-3-8(1)(b)(i) Unreasonably Affect the Natural Stream Environment

Issues relating to the beneficial uses and natural stream environment in the Green River are complex and they become even more complicated due to the fact that the U.S. Fish and Wildlife Service has listed four species of fish unique to the Colorado River system as endangered. The four species are present in all reaches of the Green River from Flaming Gorge to Lake Powell. Furthermore, since 1994, the entire river has been designated as critical habitat for those fish species.[16] The listed species rely on instream flows for spawning habitat, food, and propagation throughout the entire reach of the river. Accordingly, reduction in the flows of the Green River – specifically, in the quantities contemplated under the Change Applications -- would result in further jeopardy and harm, undermine the Operating Plan, and violate specific provision of the Endangered Species Act affording legal protections to the designated critical habitat.

1. The Reduction in Flows Following Creation of Flaming Gorge Reservoir and Subsequent Action by the US Fish and Wildlife Service Establishes the Legal Framework Requiring that Flows Released Under the Operating Plan Remain Undiverted From the Point of Release to Lake Powell

Following construction of Flaming Gorge Reservoir and the resulting change in flow regimes caused by the impoundment of water, the U.S. Fish and Wildlife Service recognized the threat to certain fish populations affected by the reduction in river flows along with degradation of aquatic habitat. Under authority of the Endangered Species Act, the Fish and Wildlife Service

[16] Under the Endangered Species Act, the U.S. Fish and Wildlife Service has primary responsibility to preserve not only threatened and endangered species, but also the natural resources on which they depend. In fulfilling this responsibility, in March 1994, the Department of the Interior designated 1,980 miles of the Colorado River as "critical habitat" for Colorado pikeminnow, razorback sucker, bonytail and humpback chub. U.S.C 1533(b)(5)(A)-(E).

listed four species and endangered. Those species include the razorback sucker, the Colorado pikeminnow, humpback chub, and bonytail chub. Listing the species as endangered imposed legal protections and mandated that steps be taken to protect and recover the fish populations. This protection focused on restoring the habitat critical to their survival.

As part of the endangered species designation, the U.S. Fish and Wildlife Service requested consultation under Section 7 of the Endangered Species Act for all Bureau of Reclamation projects in the Upper Colorado River Basin, The request included consultation regarding the continued operation of all existing projects as well as projects under construction.[17] Formal consultation on operation of Flaming Gorge Dam was initiated on March 27, 1980. That consultation initiated studies of the endangered species, their habitat, and the impacts to both created by operation of the reservoir as part of the process for issuing a Biological Opinion.[18]

In 1987, federal, state and local entities entered into a Conservation Agreement that created the Colorado Endangered Fish Recovery Program ("Recovery Program") as part of the Upper Colorado endangered species protection efforts.[19] That agreement, and resulting Recovery Program, included direct participation by the State of Utah.

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[17] February 27, 1980.

[18] Concurrent with consultation on Flaming Gorge, similar consultation and studies were conducted concerning other water projects, including the Strawberry Aqueduct and Collection System. The Biological Opinion issued as a result of that process identified impacts to the endangered species from depletions in the Duchesne and Green Rivers. Part of the opinion includes a "reasonable and prudent alternative" as provided for in the Endangered Species Act. *See* 16 U.S.C. § 1536(b)(4)vv. Under the reasonable and prudent alternative, Flaming Gorge would compensate for the project depletions and operated for the benefit of the endangered fish along with its other authorizations.

[19] The parties to the agreement were: the Colorado River Energy Distributors Association, the Colorado Water Congress, the National Park Service, the State of Colorado, the State of Utah, the State of Wyoming, the Nature Conservancy, the U.S. Bureau

A major part of the Recovery Program's mission is the: provision for instream flows; habitat development and maintenance; and research, monitoring, and data management. Those missions address the core purposes of the Endangered Species Act. The research and information gathering responsibilities of the Recovery Program were the result of the responsible entities' recognition of the lack of data and information regarding habitat and other factors necessary to recover the listed species. The initial purpose of Recovery Program was to gather information identifying the impacts to the species created by the operation of Flaming Gorge Dam and reduced Green River flows.

During the early period of the Recovery Program, the U.S. Fish and Wildlife Service was in the process of preparing the Biological Opinion for the Operation of Flaming Gorge Dam. The purpose of the Biological Opinion process is to analyze the impacts created by the operations and issue an opinion determining the threat of those operations on the endangered species.

The U.S. Fish and Wildlife Service issued the Biological Opinion for Flaming Gorge Dam and Reservoir on November 25, 1992. That opinion found that the current operation of Flaming Gorge Dam was likely to jeopardize the endangered fish in the Green River.[20] Among

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of Reclamation, the U.S. Fish and Wildlife Service, the Utah Water Users Association, the Western Area Power Administration, the Western Resource Advocates, and the Wyoming Water Association

[20] The Biological Opinion included a Reasonable and Prudent Alternative ("RPA"). The RPA required:

- Refinement of the operation of Flaming Gorge Dam so that flow and temperature regimes of the Green River more closely resembled historic conditions.
- A five-year research program that included implementation of winter and spring research flows to allow for refinement of flows for these seasons. Except for specific research flows during the five-year research program, year-round flows in the Green River were to resemble a natural hydrograph described under element one of the RPA.
- A feasibility study on the effects of releasing warmer water to the river during the spring/summer period. The study also included an investigation of the feasibility of

the conditions included in the Reasonable and Prudent Alternatives section, was the requirement that Green River flows be legally protected from the dam to Lake Powell. *See Biological Opinion on the Operation of Flaming Gorge Dam* ("Biological Opinion"). *See infra*, fn. 20.

Adhering to the conditions of the RPA, the Recovery Program assumed responsibility to conduct the studies mandated in the Biological Opinion. Those studies were ultimately synthesized into the 2000 Flow and Temperature Recommendations, which in turn provided the basis for the Operating Plan completed in 2005 and authorized in February 2006.

The Operating Plan, which is a result of the Section 7 Consultation, resulting Biological Opinion and RPA conditions, establishes minimum requirements (targets) for protection of the fish species listed under the Endangered Species Act. The primary purpose of the Operating Plan is to establish an operating patter that meets all of the designated use requirements of the reservoir while at the same time recovering the endangered species and thereby avoiding issuance of a jeopardy opinion.

As stated in the studies resulting in the 2000 Flow and Temperature Recommendation, the most critical elements of the Operating Plan are the flow and temperature targets. They are the components of the plan designed to directly protect and recover the endangered species and, accordingly, form the basis for compliance with the Endangered Species Act. The minimum

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retrofitting river bypass tubes to include power generation in order to increase spring releases.

- **Legal protection of Green River flows from Flaming Gorge Dam to Lake Powell.**
- Initiation of discussions with the U.S Fish and Wildlife Service after conclusion of the five-year research program to examine refinement of flow releases to benefit the endangered fish.

Biological Opinion (emphasis added).

flow requirements (targets) required under Operating Plan are to benefit the entire Green River, from the dam to Lake Powell, as mandated by the Biological Opinion and RPA. *See Biological Opinion. See also Operating agreement.*

2. Applicants' Expert Testimony Ignores the Legal Requirements Under the Endangered Species Act and Scientific Findings Contained in the Final EIS for the Operation of Flaming Gorge Reservoir.

At the hearing, Dr. Thomas Hardy presented expert testimony is support of the Change Applications regarding potential impacts of the diversions on the Green River ecosystem. From the outset, Dr. Hardy's focus diverged from the significant work and historical background that underlies the Operating Plan. Instead, Dr. Hardy's testimony offered that the diversions contemplated by Applicants would not detrimentally impact the natural stream habitat of the river because the percentage reduction in flow would be "*de minimis.*" *Green River Transcript* at 94:7-9. That expert opinion is based on the unsupported and erroneous conclusion that a small percentage reduction in flows anticipated by the diversion would not significantly impact endangered species or the natural stream environment. *Id.*[21]

The fundamental weakness in Dr. Hardy's testimony is that the flow calculations upon which he relies fail to take into account the target flows established as part of the RPA conditions and in accordance with the legal requirements of the Endangered Species Act. Those target flows are legally mandated under the Act and specific opinions and agreements relating to the operation of Flaming Gorge Dam. Moreover, the Record of Decision is based on U.S. Fish and

[21] Dr. Hardy renders his opinion regarding the impact of diversions under the Change Applications by referencing the small percentage in flow reduction within the river: "At this flow rate, a change in stage, line it's if you plot it, it would be under the blue so *de minimis*." Id.

Wildlife Service's concurrence that the targets contained in the Operating Plan promote the restoration and maintenance of designated critical habitat central to preservation and recovery of the endangered species. That critical habitat includes Reach 3 of the Green River, which is dependent on the target flows included in the Operating Plan to meet Endangered Species Act requirements. Accordingly, there is no foundational support for Dr. Hardy's testimony concluding that the results of diversion under the Change Application would be *de minimis*. Conversely, there is ample legal justification for disregarding the testimony in its entirety.

D. Section 73-3-8(1)(a)(iii): The Proposed Plan Is Physically and Economically Feasible; Section 73-3-8(1)(a)(iv): The Applicant Has the Financial Ability to Complete the Proposed Works; and Section 73-3-8(1)(a)(v): (v) The Application Was Filed in Good Faith and Not for Purposes of Speculation or Monopoly.

Under Utah Law, approval of a change application is contingent upon the applicant demonstrating both that the water will be put to beneficial use, and that the proposed use of water satisfies several factors. Utah Code Ann. § 73-3-1 (2009). Among those factors, the State Engineer must determine if the applicant "has the financial ability to complete the proposed works; and the application was filed in good faith, not for the purposes of speculation or monopoly." *Id.* at § 73-3-8(1)(a)(iii)-(iv).

The State Engineer serves as the gatekeeper of a statutory process meant to "provide some meaningful barrier so that the floodgates remain closed to all applications except those with a ***sufficient probability of successful perfection***." *Searle v. Milburn Irr. Co.*, 2006 UT 15,

¶ 45, 133 P.3d 382 (emphasis added). In order to enable the State Engineer to make this assessment, the applicant must do more than merely assert compliance with the standards; in order to prevail, the applicant must provide sufficient evidence "to support a reasonable belief that the changes outlined in the application can be perfected without impairing vested rights." *Id.* at ¶ 46. The State Engineer's determination "must be grounded in evidence sufficient to make that belief reasonable." *Id.*; *see also* Utah Code Ann. § 73-3-5 (State Engineer has statutory duty to examine the application and determine whether additional information is needed before further processing). Further, if there is "reason to believe" that the proposed use will violate the statutory standards (e.g. interfere with more beneficial use, harm the stream environment, or prove detrimental to public welfare), the State Engineer has the duty investigate further before approving or rejecting the application. *Id.* at § 73-3-8. This investigation and consideration of the application should include evaluation of circumstantial evidence. *Searle*, 2006 UT at ¶ 56. Moreover, throughout the process, the burden of persuasion remains on the applicant. *Id.* at ¶ 54.

In this case, far from meeting the Applicants' burden of persuasion, the application submitted is incomplete and does not provide the necessary statutory information to support an approval by the State Engineer. The information that Applicants did provide demonstrates that the proposed beneficial use of water – supplying a currently unbuilt nuclear power plant – is neither financially feasible nor anything more than a purely speculative use of water.

1. Applicants Fail To Show That Water Will Be Put To "Beneficial Use" In A Nuclear Power Generation Facility As Described In The Change Applications.

"Our legislature has declared that beneficial use 'shall be the basis, the measure and the limit of all rights to the use of water in this state.'" *In re General Determination of Rights,* 2004 UT 67, ¶ 51, 98 P.3d 1 (quoting Utah Code § 73-1-3(1998)). In determining beneficial use, the court examines "two different components: the type of use [beneficial or not] and the amount of use [physical diversion]." *Id.* at ¶ 52 (citation omitted). Even if the applicant can show a feasible physical diversion, "a diversion of water merely to serve purposes of speculation or monopoly will not constitute beneficial use under § 73-3-8." *Id.* at ¶ 51.

In this matter, Applicants seek approval to move water rights that they themselves will neither divert nor use. Rather, Applicants intend to hold the water right through permit approval and preconstruction stages until another, as yet unknown, third party steps in as "owner-operator" of the project. *See Green River Green River Transcript* at 131: 11-18. Actual construction, ownership and operation of the project will be performed by this unidentified "owner-operator." *Id.* Any application approval issued to Applicants, therefore, will not be used to divert water or generate nuclear power. Instead, an approved change application would be used by Applicants to hold water rights allocated under the application for potential future use by unknown parties in a highly speculative venture. This venture violates the beneficial use requirements of physical diversion and non-speculative purposes, and, accordingly, should be denied.

a. THE APPLICANTS FAIL TO PROVIDE EVIDENCE DEMONSTRATING THAT THEY WILL PUT ANY OF THE WATER APPROVED UNDER THE CHANGE APPLICATION TO USE FOR NON-SPECULATIVE PURPOSES.

At its core, the test used to determine if an application is filed for speculative or monopolistic purposes under Utah Code §73-3-8(a)(iv), is a beneficial use test.[23] The Utah Supreme Court has held that "a water user's appropriations are limited to the amount ***the user*** puts to beneficial use." *In re General Determination of Rights,* 2004 UT ¶ 24 (emphasis added) (citing *Green River Canal Co. v. Thayn,* 2003 UT 50, ¶ 34, 84 P.3d 1134. The context of this ruling is helpful; the Court considered an application whereby the applicant claimed the domestic water use of twenty-seven homes as his own. The Court denied the Applicants' claim to the water right, finding the application invalid because the "water user cannot claim more water than he can beneficially use." *Id.* at ¶ 25; *see also Western Water, LLC. v. Olds*, 2008 UT 18, ¶8, 184 P.3d 578 (noting State Engineer's "thoughtful memorandum" decision rejecting application as filed for speculation or monopoly where "the only proposed beneficial use for the water was a plan to sell it to others."). In considering the application, therefore, the State Engineer must look to the Applicant's actual water use, not that of another party.

Based on the facts in their application, Applicants have not shown that they have the ability, resources, or even the ***intent*** to divert and use water allocated under the application. As noted above, Applicants are merely attempting to claim water for future use by another, as yet

[23] Contrary to Applicants' assertions, "beneficial use" is not merely a legalistic term subject to creative interpretation. Beneficial use determinations rest on an extensive history of case law and statutory guidance. Variations may occur because "[b]eneficial use determinations rely heavily on the facts and circumstances of each case." *In re General Determination of Water Rights*, 2004 UT at ¶ 45.

unknown, party or parties who presumably will pay Applicants for the water rights and preliminary permits secured by this process. This scenario demonstrates all that is abhorrent to the Utah Legislature regarding non-beneficial and speculative uses of water – if successful in their application, the Applicants tie up a significant amount of water for an indefinite amount of time for the benefit of future business entities who might care to gamble on the construction and operation of a nuclear power plant, all with no beneficial use of the water in the interim.

Applicants do not contest this description of the limited role that they will play in the proposed diversion or beneficial use of the water. During the public hearing, Applicants conceded that because of the tremendous costs and expertise that nuclear construction requires, Blue Castle itself does not have the "wherewithal to build a nuclear power plant." *Green River Transcript* at p. 263: 5-7. Instead, an "owner-operator not yet identified" will construct, own and operate the proposed nuclear facility. *Id.* Even under Applicants' own description of their role, it is undisputed that Applicants' "use" of water is limited to controlling the water rights allocated under the change application. Aaron Tilton, Blue Castle CEO, explained that the applicant is merely "a sponsoring development company." *Green River Transcript* at 60: 10. The plan is that Blue Castle will shoulder the project through licensing and then "[unidentified] utility participants effectively use their own credit facilities to construct the project." *Id.* at 63: 23-25. Mr. Tilton stated that prior to construction, the applicant "has an exit and staging of capital based

on these [unidentified utilities and investors] participants coming into the project that negotiate over the next two and half, three years...." *Id.* at 61: 1-4.[24]

Accordingly, far from demonstrating that they will engage in feasible, physical diversion of the waters for beneficial use, Applicants have conceded that they themselves have no intention of using the water, beneficially or otherwise. Much like the rejected applicant who sought to justify the water he claimed by including the uses of twenty-seven other homeowners, Applicants seek to validate their change application by referring to the potential future use of the water by third-parties. Here, the potential beneficial use is even further removed from reality, as Applicants appear to be little more than a straw man holding the legal right to the water until a group of investors with "the wherewithal" and expertise necessary to construct a nuclear power plan can be "put together." This conveniently puts all responsibility for the details of diversion and subsequent use of the water in a nuclear power plant on the entities not yet in the picture, but hardly satisfies the legal requirements for approval of a non-speculative change application. Applicants' proposal is little more than a request for the State Engineer to approve their blatant speculation that they can find a buyer for a significant amount of water rights in an area already deemed over-appropriated – the particulars of that buyer's use of the water, the timeframe for making any actual diversion, and the ultimate operation of the proposed nuclear plant will all be details sorted out by entities other than the Applicants.

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[24] Nils Diaz further explained that instead of Blue Castle (the right holder) "there will eventually be an owner-operator entity identified, and that owner-operator entity will be responsible to the Nuclear Regulatory Commission for the construction, operation of the plant, and that entity will receive federal scrutiny as to what its capabilities, experience, financial and everything..." *Green River Transcript* at 131: 11-18.

2. The Project Proposed By The Applicant Is Not Feasible.

Even if Applicants could use the proposed future use by a third party as their own beneficial use, Applicants have failed to demonstrate the future project is physically and economically feasible. *See* Utah Code Ann. § 73-8-3 (2009). The Utah Supreme Court distinguishes between feasibility of a development and mere possibility, stating that "feasible development must not be merely in the realm of speculation because the land is adaptable to a particular use in the remote and uncertain future." *City of Hildale v. Cooke*, 2001 UT 56, ¶ 23, 28 P.3d 697. Similarly, the State Engineer has rejected applications as not physically or economically possible where the application lacked "any evidence of contracts, permission or support for gaining access to facilities, lands or customers." *Western Waters, LLC*, 2008 UT at ¶ 8. In this case, lacking the appropriate evidence of feasibility, Applicants' application fails.

Applicants fail to provide any evidence demonstrating the feasibility of the proposed construction of a nuclear power plant requiring 53,600 acre feet of water. Absent NRC evaluation of the potential site, and submission of studies and information required under federal law governing nuclear facility citing, Applicants cannot make any claim regarding the physical feasibility of the plant. With respect to economic feasibility, Applicants must provide evidence demonstrating that there is in fact a demand for power, and that their proposal is capable of supplying that demand. Here, the applicant has done neither.

a. APPLICANTS FAIL TO DEMONSTRATE THAT THE PROPOSED CONSTRUCTION OF NUCLEAR GENERATION FACILITIES IS PHYSICALLY FEASIBLE.

The Applicants claim that the project has "physical feasibility" based on "preliminary site evaluations." *Green River Transcript*, 261:14-17. Specifically, Applicants point to two studies and Dr. Hardy's water presentation as "air tight" proof that the proposed site is suitable for proposed nuclear construction, and therefore the project is physically feasible. *Id* at 261:14-21. Under state and federal law, the evidence provided by Applicants fails to demonstrate even under the most lenient of standards that the proposed nuclear plant is "physically feasible."

In evaluating feasibility, "a land owner may testify concerning individual elements of feasibility, but that landowner must offer the testimony of a properly qualified expert to prove the actual feasibility of a potential use." *City of Hildale*, 2001 UT at ¶ 25. In the context of nuclear power generation, site suitability or adaptability for nuclear construction is defined under 10 CFR, Part 50 and determined by the Nuclear Regulatory Commission. However, Applicants did not present any evidence of NRC review or approval of the proposed site; indeed, Applicants have not yet even requested NRC regulatory approval. Absent any NRC review or determination regarding the development of the site for nuclear generation, Applicants can only speculate as to physical feasibility of their proposal.

Apart from the lack of regulatory approval or review by the NRC, the most glaring obstacle to physical feasibility is Applicants' failure to execute the purchase agreement and take title to the site. A purchase agreement does not constitute ownership. Absent any title, and without full disclosure regarding capital structure of the project or the identity of a future

"owner-operator," the purchase highlights the speculative nature of this proposal. Though Applicants are eager to obtain State Engineer approval as to their change application, they are far more reluctant to invest any real capital in the project and take title to the property. Without title to the site, there is no evidence to support the claim that they can develop the site as proposed. *See Western Waters, LLC*, 2008 UT at ¶ 8 (noting with approval State Engineer's "thoughtful" rejection of application that lacked "lands, facilities, customers, or contracts").

Further, without title to the site, NRC staff cannot determine, or consider Applicants' ESP application. For purposes of safety and to weed out "amateurs" "jumping on the nuclear bandwagon," NRC requires ESP applicants to maintain ownership and control of the proposed nuclear construction site. NRC Chairman, 2007. While the referenced purchase agreement may evidence Applicants' intent to eventually invest in the project at a future date, it also demonstrates that the applicant does not have ownership and control of the site and thereby disqualifies Applicants from the ESP process.

Even if Applicants did in fact purchase the property, they fail to provide information required under 10 C.F.R. § 52.17 to determine a project's site suitability. Cursory review of publicly available data is insufficient. BCH does not present any evidence required by NRC to considering the site suitability in terms of: location and description of nearby industry; existing and future projected population; site safety assessment including a risk analysis of fission product release; and radiological consequences of leaks offsite. *See* 10 CFR § 52.17(a).

Additionally, there is no evidence presented that demonstrates the site complies with part 10 CFR § 100, as required under 10 CFR § 52 § 17(b). The information provided does not

satisfy 10 CFR § 100, Appendix A, which lays out the requisite criteria for geologic and seismic site suitability studies. Applicant has not explained how it intends to comply with NRC regulations requiring that all safety infrastructure, including water intake structures, are located on site within the exclusive control of the applicant.

Apart from the federal regulations, Applicants fail to comply with Utah Code Ann. § 73-3-2(1)(b)(viii) by not providing any information regarding the dimensions, grade, shape and nature of the proposed diverting channel. In fact, other than general statements assuring the State that it will comply with federal permitting requirements, Applicants have not addressed any has not provided any information regarding the construction of intake structures. Applicants' water expert, Jerry Olds, concedes that much of this information regarding intake structures and water withdrawal is "dependent upon the design and technology used in designing the plant, the power production level from the plant itself and climatic conditions and then cooling water cycle." *Green River Transcript*, 72:21-25. Of course, these necessary details of design and technology are not known at this time. However, Applicants' failure or inability to determine the basic parameters of the proposed plant design does not excuse them from meeting the basic informational requirements of Utah law.

Moreover, Mr. Olds' statement brings a related problem into focus with respect to the proposed diversion and water usage – although Applicants claim rights to a significant amount of water, without identifying the design and technology of the nuclear reactor, their estimates regarding water usage are mere guesses. In fact, without identifying the nuclear generation

technology to be put into place, any information presented regarding environmental impacts, site suitability, and power generation also is speculative.

Given the significant information gaps on the record regarding the nuclear generation facility itself, merely reciting publicly available data is insufficient to demonstrate that the site is physically suitable for nuclear deployment even under the most lenient standard of review. Given that the nuclear plant is the only proposed beneficial use of the water, Applicants have failed to meet their statutory burden for approval of the change application.

3. The Applicant Failed to Demonstrate Economic Feasibility of the Proposed Use.

The Utah Supreme Court defines "economic feasibility" as evidence that there is "sufficient demand for potential use." *City of Hildale*, 2001 UT at ¶24. Here, Applicants failed to provide any credible evidence or expert testimony regarding the economic feasibility of the project. The information contained in the record amounts to little more than vague generalizations regarding "power need" presented by co-counsel for Applicants, Mr. Wright. See *Green River Transcript*, 262. Mr. Wright asserted that, "And there is really no doubt, of course, there is a significant demand for electricity, and it's growing." *Id.* at 262:14-15. This type of conclusory statement can hardly be the basis for a finding that the project is supported by adequate economic demand.

There is nothing presented in Mr. Wright's credentials that indicate he is qualified to present his conclusions on "economic feasibility." He is an attorney, not an economist, nor a statistician. Further, Mr. Wright did not establish himself as an expert in the power industry or in

electricity market modeling. As set out in *Hildale City*, there must be proper foundation laid to qualify a witness to give specific testimony, and assessments of "actual feasibility," are properly reserved for expert witnesses. *City of Hildale*, 2001 UT at ¶ 24. Even as a conduit for other people's opinions, Mr. Wright did not present any kind of statistical analysis based on past end-use energy consumption and forward price curves. Instead, Mr. Wright merely reasoned that, "Everyone's got a computer. The more we plug in our 25 cars to charge them, the more we need electricity to do that. So the question then is, is there a market" *Id.* 262:24-25. Based on the presence of computers and electric cars, Wright then concludes: "Of course there is [a market]." *Id.* at 263:1-2.

This type of simplification stands in stark contrast to demonstrations of economic feasibility in other contexts. For example, when arguing economic demand before the Public Service Commission, Rocky Mountain Power constructs complex statistical models based on historic consumption and usage trends. Before selecting any kind of generation technology (nuclear or thermal), the utility runs a risk analysis determining potential benefits and liabilities before deciding on the least cost, lowest risk generation option. Based on the record, there is no evidence that Applicants' proposal is the outcome of any similar kind of reasoned analysis. Accordingly, there is little basis for the State Engineer to find that the proposal is economically feasible.

4. The Applicant Does Not Have the Financial Ability To Complete Nuclear Generation Construction.

Utah Code Ann. § 73-8-3(a)(iv) requires that approval of the Change Applications include a determination that "the applicant has the financial ability to complete the proposed works." The Applicants estimate that projected costs of the proposed water diversion total "$18 billion." *Green River Transcript*, 263:9. Based on the statements and representations made by Applicants, they do not have the financial ability to bear the costs of owning and operating the proposed generation facility. *See, e.g. Green River Transcript,* 263:3-6 (co-counsel for Applicants answering "whether Blue Castle has the wherewithal to build a nuclear power plant," and concluding, "Right now, no.") Applicants apparently maintain that their financial ability is irrelevant because "there will eventually be an owner-operator entity" that ***will*** have sufficient credibility to satisfy state requirements and survive "federal scrutiny as to what its capabilities, experience, financial and everything..." *Id.* at 131:16-8.[25] Essentially, Applicants are claiming that as a "permit sponsoring company," they should be exempt from the usual requirements of state law for appropriating water, and the State Engineer should take on faith the representation that the eventual owner will meet all legal requirements.

While Applicants may dismiss (or at least defer until a future date) the importance of legal requirements imposed by the State of Utah, the State Engineer cannot afford to disregard the paucity of information on the record. The State Engineer is required to evaluate the

[25] *See also* testimony of Blue Castle Holdings executive, Neil Diaz, indicating that they assume they will incur no construction costs or liability, since the eventual owner-operator will undertake NRC licensing liabilities and finance construction costs. It is this unidentified owner-operator that will "decide when they need the power, what fits well and what has the most financial advantages for them to build it." *Id.* at 64:20-3.

applicant's financial ability under Utah Code Ann. § 73-3-8(a). This requirement is not discretionary. The code explicitly charges the State Engineer "with the duty" to determine if the applicant has the financial capability of completing the proposed project. *Id.* If the application does not demonstrate the applicants' financial capability, the State Engineer must reject the application. *See* Utah Code Ann. § 73-3-8 (b)(ii). Here, the State Engineer must evaluate the financial ability of the Applicants, not assume the financial ability of an unknown future investor and business owner.

As far as the facts that ***are*** known at this point, Applicants claim that Blue Castle Holdings have "staged capital" from an investment bank totaling $50 million. *Green River Transcript* at 59:21-23. They do not identify the "investment bank" or the terms of its investment. Nor is there any contract with a "participant" indicating any real equity ready for investment in the project. Applicants do, however, indicate that this investment is allocated toward licensing costs estimated at $100 million. There is no given explanation as to how the remaining $50 million in licensing costs will be financed, much less the estimated $18 billion in construction costs.

Based the record evidence, in examining financial ability, the State Engineer can only conclude that Applicants lack the financial ability to construct the proposed water diversion and eventual beneficial use of that water.

E. Section 78-3-8(1)(a)(iii): The Proposed Plan Would not Prove Detrimental to the Public Welfare.

The appropriation statute requires the State Engineer to reject change applications that are contrary to the public welfare. Utah Code Ann § 73-3-8(1)(a)(iii). Although not specifically defined in the statute itself, the public welfare criteria is broad and covers interrelated aspects of many of the listed criteria as well as the underlying policies of the State of Utah regarding highest and best use and wise allocation of public resources. *See Tanner v. Bacon*, 103 Utah 494, 136 P.2d 957 (1943).

In addition to the enumerated State Engineer review criteria addressed in Sections A through D, above, the proposed use of water under the Change Applications also raises public welfare issue that merit rejection of those applications. Review of many of these public welfare factors requires the State Engineer to weight detrimental impacts to the public welfare under application of a reasonableness standard. Factually, the issues have already been defined by Applicants' own testimony presented in support of the Change Applications and the contradicting evidence offered by many of the protestants:

1. Approval of the Change Applications Would Adversely Impact the Economy of Green River and Surrounding Area.

Because of the late priority of the underlying water rights and date of change application filing, coupled with the need for firm water supplies even in times of shortage, the uses proposed under the Change Applications will negatively impact the agricultural economy of Green River that is wholly dependant on vested water rights. As set forth in attached statements provided by water right owners in Green River, water from the river is the life-blood of the individual

farming operations and Town of Green River. Water Right owners in and around Green River have invested substantial sums of money developing the farms that are dependant on water supply from the Green River under early priority vested water rights. These farms also offer employment to residents of the area. Accordingly, impairment of the water rights appurtenant to those farming operations resulting from approval of the Change Applications would undermine the economic basis for those economic investments, destroy confidence in the legal protections relied upon in developing ongoing business operations, and generally devastate the economy in Green River.

Under an all too foreseeable set of circumstances, senior water right owners will be forced to bypass water supplies to the nuclear power plant in order to ensure safe operation of the nuclear facility at the expense of their own business operations. Based on statements made by Applicants at the hearing, the bypass of water would be required during periods when diversions under the Change Applications are cut off by priority date in accordance with well-defined and long-established law.[26] Those bypasses would not only cause harm to the water right owners, but severe economic harm to the economy of Green River. The threat of harm posed by the Change Applications dictates rejection by the State Engineer.

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[26] At the hearing, applicants evaded direct question exposing this fundamental flaw in the Change Application. Although they ultimately admitted that the proposed nature of use could not be subject to priority cuts because of the overriding safety concerns and federal regulatory requirements, Applicants also presented no plan for mitigating damages to senior water rights holders or compensating those same water right holders for the loss of their investments. That loss could be substantial. Green River Company representative Tim Vetere testified that his business spends several million dollars a year in seed for his crops. Bypass requirements lasting only a number of days threaten to destroy that substantial investment. Under existing law, Green River Company could seek damages caused as a result of interference with its water rights ad attempt to recover. However, such a scenario with respect to these Change Application should never occur because it is the duty of the State Engineer to rejects such applications, particularly when Applicants have failed to demonstrate a plan for compensating the injured owners of senior water rights holders. *See* Utah Code Ann. §§ 73-3-3(2)(b) and 73-3-8(1)(a)(ii).

2. Benefits Resulting From Any Beneficial Use of Water Under the Change Applications Will Not Be Realized by Citizens of the State of Utah.

As stated in Applicants' testimony at the hearing, much of the power to be generated from the nuclear power plant will be delivered to customers outside of Utah. No contracts for power generated from the plant have been executed and no commitments from area power providers have been made. *See Green River Transcript.*

Water in the Green River system is already scarce and is a limiting factor preventing future development of the region. Utah water policy, which is grounded on basic tenets of the Appropriation Doctrine, encourages and facilitates the use of water for the improvement of land and creation of industry. *See* Utah Code Ann. § 73-1-1. The allocation of the quantities of water requested under the Change Applications completely dedicated to evaporative cooling will result in the annual depletion of 53,600 acre feet of water from the Green River. As an example of the significant loss of water in the river and to the citizens of the state that would result from approval of the Change Applications, the planned depletion amount is equal to the entire water supply stored in East Canyon Reservoir. Water from East Canyon Reservoir, by itself has tremendous economic and recreational value, not to mention the fact that it is extensively used to supply homes, farms and businesses along the Wasatch Front with necessary water supplies. The water covered under the Change Applications will not be applied to lands or used in homes. Instead the water will simply be lost to evaporation. Nearly all the benefits derived from the use of the water – generation of power for sale throughout the western United States – will be to people other then those residing in Green River or elsewhere in the State of Utah. At the hearing

on the Change Applications, more then one person stated that they would like additional water to improve their lands and further their businesses. The evaporative depletion of a scarce public resource for the benefit of people residing outside of Utah is clearly contrary to the public interest and the economic interest of the State, particular when there are more beneficial uses to be made of that same water within the Green River area.

Nuclear power, when compared to other forms of power generation, consumptively uses significantly more water. The quantity of water required by traditional coal or gas fired power plants represents only a fraction of the water needed to cool a nuclear reactor. Factoring in the true costs of power production and delivery per kilowatt-hour of a nuclear power, the cost benefit ratio weighs heavily in favor of rejecting the Change Applications on the basis that the proposed plan is contrary to the public welfare.

Section 73-3-8(1)(a)(ii) requires the State Engineer consider relative value of the requested nature of use against other potential uses and the public interest in evaluating the Change Application. That consideration necessarily involves a determination as to the best allocation of scarce public resources and the benefits afforded to the citizens of the state, even if indirect, from beneficial use of the water. Aside from irrelevant generalizations about power demands and the need within Utah for additional power supplies, it is difficult to identify any public benefits that warrant approval of the Change Applications under the public welfare criteria. Conversely, approving such a significant depletion of water from Utah's limited available water supply for

the purpose of generating high-cost power to be exported out of the state provides ample justification for demanding denial of Change Applications under Section 73-3-8(1)(a)(ii).[27]

3. The Impacts To Public Recreation Should Also Be Considered In Reviewing The Change Applications As Part Of The Public Welfare Criteria.[28]

To support the local economy, Green River and the surrounding areas rely heavily upon tourism based on use of the Green River for fishing, rafting, and other recreational pursuits. Testimony presented by outfitting companies, both in written protest and at the hearing, provided evidence that approval of the Change Applications would detrimentally impact those businesses and the use of the Green River for recreational pursuits. There are many stretches of the river below the town of Green River where rafts and canoes must already be carried over low spots in the river. The depletion of an additional 53,600 acre-feet of water under any change application approval will only create additional problems for recreational users of the river. Those negative impacts will unreasonably threaten the vitality of the local economy at the expense of Green River residents. Such negative economic impacts are contrary to the public welfare and state policy on water rights.

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[27] Approval of the Change Applications authorizing the use of water to primarily generate a product that is supplied to people outside of the state is not all that different from a request by Las Vegas for approval of a change application seeking to divert 53,000 acre feet of water from St. George sources to be transported by pipe for use in Nevada. The same economic and natural resource impacts that would occur in the example will occur here. The citizens of Green River will be denied the opportunities.

[28] Utah Code Ann. § 73-3-8(1)(b)(i).

4. The Change Applications Are Based on Water Rights that Are not Suitable for the Intended Purposes

Applicants have placed the State Engineer in an unenviable position by seeking approval of Change Applications that do not legally meet the requirements of the intended use. The contrast between the inadequate components of the underlying water rights with the intended uses highlights the inappropriateness of any consideration of approving the Change Applications. Many of the issues raised by the Change Applications are the result of choice made by Applicants in acquiring the right to use water under these specific applications and seeking State Engineer assistance in fitting those rights into niche in which they are wholly inadequate.

Applicants have acquired water rights that have long histories repeatedly exposing and inexcusable lack of diligence in placing the water to beneficial use and perfecting the rights. Moreover, by seeking to move late priority water rights to the Green River system, Applicants have asked the State Engineer to ignore some of the most fundamental principals of Utah water law. The Change Applications ask the State Engineer to ignore commitments already made under the Endangered Species Act to protect and recover endangered species in the Green River. Applicants also ask the State Engineer to dismiss the vested prior rights of other water right owners in order to ensure the safety of area residents from potential catastrophe by essentially demanding that water right priorities be ignored. Moreover, the Applicants have asked the State Engineer to place their own financial interests above the best interest of the citizens of Utah. They do so by seeking the right to remove significant quantities of water from the state water budget for the development of a commodity that is to primarily benefit residents of states other

than Utah. All of these factors dictate rejection of the Change Applications under the public welfare criteria.

IV.

OTHER ISSUES

A. The Application Does Not Provide Sufficient Information Upon Which the State Engineer Can Properly and Fully Conduct His Review Under the Requirements of Section 73-3-8.

As exposed at the hearing, Applicants' entire plan for placing the water to beneficial use is dependent upon permitting by the United States Nuclear Regulatory Commission (NRC) and fulfillment of the requirements of that agency. Those necessary requirements include mandatory provisions for emergency water supply and the storage of water necessary to cool the nuclear reactor in case of unavailability of flows or other extraordinary circumstances. The Change Applications do not propose sufficient storage to meet those requirements. Applicants seek approval to store 2,000 acre-feet of water under the Change Applications. That quantity is insufficient to meet the "heat sink" 30-day supply. The hearing testimony of Nils Diaz stated that the storage requested under the Change Applications would be sufficient for a period that is significantly less than the 30-days required by the NRC. The failure of the Change Applications to meet the water supply requirements of the nuclear permits renders the project physically infeasible. The State Engineer cannot presume that water under the Change Applications will be placed to beneficial use as required by Utah law if the water use plan does not meet the minimum requirements for permitting and operation of the project. Accordingly, the State Engineer must reject the Change Applications as contrary to the requirements of law

CONCLUSION

Protestants reserve the right to present any additional information in response to new facts or arguments presented by Applicants in their response to the supplements. Protestants also request that the State Engineer fulfill his statutory obligations and withhold a decision on the Change Applications until the Bureau of Reclamation and other interested parties and agencies have completed the ongoing Colorado River study that will define water supplies in the river system and allow the State Engineer to properly act upon full information and a complete record. Any timing issues relating to the underlying lease agreements are issues that should have been foreseen and can be resolved by Applicants. Those burdens should not be borne by other water right owners or the public. Based on the criteria in Utah Code Ann. §§ 73-3-3 and 73-3-8, Protestants request that the State Engineer deny the Change Applications based on express findings that the applications do not meet the requirements prescribed under the statutes.

DATED this 1st day of March, 2010.

FLITTON & SWENSEN

John S. Flitton

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Lara A. Swensen
Attorneys for Protestants Heal Utah and
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Tab 3

The Order of Court is stated below:
Dated: April 21, 2014 04:28:10 PM
/s/ George M. Harmond
District Court Judge

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STATE OF UTAH
IN THE SEVENTH DISTRICT COURT OF EMERY COUNTY

HEAL UTAH, et al. Plaintiffs, vs. KANE COUNTY WATER CONSERVANCY DISTRICT, et al., Defendants.	:	**FINDINGS OF FACT, CONCLUSIONS OF LAW AND JUDGMENT APPROVING CHANGE APPLICATIONS** a35402 AND a35874 Civil No. 120700009 (Consolidated case with Case No. 120700010) Judge George M. Harmond

This matter was tried to the bench trial on September 23 through 27, 2013, sitting by stipulation of the parties at Price, Utah. Plaintiffs were present and represented by John S. Flitton and Lara A. Swensen. Defendants Blue Castle Holdings, Kane County Water Conservancy District and San Juan County Conservancy District were present and represented by David C. Wright and John H. Mabey, Jr. The Utah State Engineer, Kent Jones, was represented by Julie I. Valdes. The Court, having heard testimony, received exhibits, reviewed

the trial briefs of the parties, and considered the arguments of counsel, and consistent with its Memorandum Decision of November 27, 2013, makes the following findings of fact, conclusions of law and judgment.

Introduction

The Court is asked to approve two change applications, a35402, based on approved Water Rights 89-74, 89-1285 and 89-1513 (Kane); and a35874, based on approved Water Right 09-462 (San Juan) ("Applications") concerning the use of water for a proposed nuclear power plant near Green River, Utah. The Applications seek to use 53,600 acre-feet of water per year by diverting up to 75 cubic feet per second ("cfs") continually from the Green River. Previously, the water rights were approved for use in steam power generation at coal fired power plants. That same use—electric power generation—is requested here.

Pursuant to his statutory duties concerning the administration of Utah's water, Utah Code Ann. §73-2-1(3)(a)("The state engineer shall be responsible for the general administrative supervision of the waters of the state and the measurement, appropriation, apportionment and distribution of those waters."), the Utah State Engineer, Kent Jones, approved the Applications in 2012. The plaintiffs, HEAL Utah and others, protested the Applications and now challenge that approval, requiring this court to apply the same statutory criteria in a de novo analysis pursuant to Utah Code Ann. §73-3-14. Kane and San Juan County Water Conservancy Districts and Blue Castle Holdings are referred to together as the Applicants.

General Findings of Fact

1. Blue Castle Holdings ("Blue Castle") proposes to build a multi-unit nuclear powered electrical generating plant near Green River, Emery County, Utah.

2. In preparation for obtaining federal licensing of the plant, Blue Castle has secured water and some of the real property necessary for the operation of the proposed pant.

3. Transition Power Development, LLC, Blue Castle's predecessor in interest, leased from the Kane County Water Conservancy District ("Kane") Water Right Nos. 89-74, 89-1285 and 89-1513, representing 29,600 acre-feet of water, the original diversion point of which was from Lake Powell and Wahweap Creek in Southern Utah.

4. The Kane water right was filed on January 15, 1964, by another party for the development of a coal-powered power plant near Lake Powell, with the water being diverted from Lake Powell/Colorado River.

5. The Kane water right was approved on September 3, 1965, but was subordinated to the Central Utah Project water rights and several other applications in the Uinta Basin and the Duchesne River.

6. Over the years the Kane water right was transferred several times and, on November 24, 2003, it was transferred to Kane.

7. Transition Power also leased from the San Juan Water Conservancy District ("San Juan") Water Right No. 09-462, representing 24,000 acre-feet of water, with the point of diversion located on the San Juan River in San Juan County, Utah.

8. The San Juan water right at issue is a segregated portion of a water right originally filed on October 14, 1965. The water right was segregated and approved in 1967 for a coal-fired power plant near Mexican Hat, Utah.

9. The priority date for the San Juan water rights is April 21, 2000, as a result of an application for reinstatement after the first approved application lapsed.

10. The water represented by both of these leases has previously been approved for use in the operation of steam power generation at coal-fired power plants in Kane and San Juan counties, but because those projects are no longer viable, the Districts have leased the water rights to Blue Castle.

11. The Districts filed change applications a35402 and a35874 (the "Applications") to change the points of diversion of the water to the Green River located near Green River, Utah. The proposed place of use of the water is at the site of the proposed nuclear plant in Emery County, located approximately 4.5 miles west of the Green River.

12. The change application for Kane was filed with the State Engineer on March 30, 2009,

and for San Juan on August 27, 2009. The Applications were supported by Blue Castle, which as the project developer, provided evidence in support of the Applications.

13. Blue Castle asserts that the nuclear power plant ("the Project") would consume and deplete the entire 53,600 acre-feet of water represented by the Applications, drawing a maximum of 75 cfs continuously from the Green River, primarily for use in creating steam to generate power and for cooling the plant.

14. The Applications also seek approval to store 2,000 acre-feet of water in a reservoir located on the Project site.

15. The state engineer, Kent Jones, ("State Engineer") held an administrative hearing on the Applications on January 12, 2010, and thereafter conducted extensive investigation.

16. In a decision dated January 20, 2012, the State Engineer approved the Applications to change the points of diversion and allowed diversion and depletion of 53,600 acre-feet and a diversion rate of up to 75 cfs. On February 28, 2012, the State Engineer denied a Request for Reconsideration filed by certain protestants on February 9, 2012.

17. The Plaintiffs filed two actions on March 27, 2012, challenging the Applications in two separate complaints. The actions were consolidated on May 16, 2012.

18. The court notes that the Project, if constructed, would be Utah's first nuclear power plant.

19. Blue Castle is developing the Project pursuant to 10 C.F.R. Part 52. The Project is phased, and if it proceeds, the Project will require an environmental impact assessment prior to the submission of an application for an Early Site Permit to the Nuclear Regulatory Commission, and then a full environmental impact statement prior to the approval of the Early Site Permit. In order to construct and operate the Project, Blue Castle would need a combined operating license from the NRC.

20. Plaintiffs make the argument that the State Engineer has ceded a final decision on Utah water rights to federal agencies. But regardless of what is determined here, if the environmental impacts cannot be resolved, the Project will not be able to use the water rights.

1. Legal Standards

In Utah, water belongs to the public and potential users must apply to the State Engineer for authority to withdraw water from a natural source. Utah Code §73-1-1(1)-(2). To authorize the use of water, whether it be a new application to appropriate or a change to an approved applications' point of diversion, place of use, or purpose of use, the State Engineer must apply the criteria mandated by statute. §73-3-8. *See Bonham v. Morgan*, 788 P.2d 497, 500 (Utah 1989).

All State Engineer administrative actions, unless designated otherwise, are informal proceedings. Utah Admin. Code R655-6-2.

> The legislature created the office of the State Engineer 'to keep records of all established water rights and those to be acquired in the future, to supervise the distribution of the water, and to keep records of and regulate future appropriations and changes in the place of diversion, use and nature of the use.' *United States v. District Court, Utah,* 238 P.2d 1132, 1134 (Utah 1951); *see also* Utah Code Ann. §73-2-1 (1989 & Supp. 2002) (identifying responsibilities of the State Engineer). Due to the scarcity of water resources in our state, appropriation of water is tightly controlled and the State Engineer oversees each step in the application and appropriation process.

Green River Canal Co. v. Thayn, 2003 UT 50, ¶28, 84 P. 3d 1134.

"A person aggrieved by an order of the state engineer" has the ability to obtain judicial review under the water statutes and the Utah Administrative Procedures Act. Utah Code Ann. §73-3-14 (1). The petitioner requesting judicial review is required to name the state engineer as respondent. §73-3-14(3)(a). Pursuant to Utah Code §63G-4-402 (1)(a), this Court has jurisdiction "to review by trial de novo all final agency actions resulting from informal adjudicative proceedings." The court, "without a jury, shall determine all questions of fact and

law." §63G-4-402(3)(a).

The court's review by trial de novo "means a new trial with no deference to the administrative proceedings below." *Archer v. Bd. Of State Lands & Forestry,* 907 P.2d 1142, 1145 (Utah 1995). The issues before the court in its plenary review are, "however, strictly limited to those which were, or could have been, raised before the State Engineer." *Crafts v. Hansen*, 667 P.2d 1068, 1070 (Utah 1983); *Searle v. Milburn Irr. Co.*, 2006 UT 16, ¶34, 133 P.3d 382. The Supreme Court of Utah stated in *Badger v. Brooklyn Canal Co.*, 922 P.2d 745, 751 (Utah 1996), that:

> Although it may be inappropriate to impose the same level of strict waiver analysis that we have applied to issues or objections not raised before a trial court, the failure to make known the nature of one's rights in the course of an administrative proceeding clearly disentitles a party from raising its claim for the first time before a district court on de novo review.

(citation omitted).

"[T]he decision of the court on review, except for the formalities of the trial and judgment is of the same nature and for the same purpose [as that of the State Engineer.]" *Searle,* 2006 UT 16, ¶34. Accordingly, under §73-3-8(1)(a), it is the duty of the court to approve applications for permanent changes in the point of diversion, the place of use, or the purpose of use for which the water was originally appropriated, if the court has reason to believe that:

> There is unappropriated water in the proposed source;
>
> The proposed use will not impair existing rights or interfere with the more beneficial use of the water;
>
> The proposed plan is physically and economically feasible...and would not prove detrimental to the public welfare;
>
> The applicant has the financial ability to complete the proposed works; and

The application was filed in good faith and not for purposes of speculation or monopoly.

The court is required to reject the application if it fails to meet the requirements of Utah Code Ann. §73-3-8(1)(b).

Searle describes the procedure as "placing a fairly low burden on a party seeking approval of a change application," but that it "must provide some meaningful barrier so that the floodgates remain closed to all applications except those with a sufficient probability of successful perfection." 2006 UT 16, ¶45, *quoting Salt Lake City v. Boundary Springs Water Users Ass'n.*, 270 P.2d 453, 455 (Utah 1954). Accordingly, *Searle* stated that it "must be clear that the decision maker's determination that there is reason to believe is grounded in evidence sufficient to make the belief reasonable." *Id.* ¶46. "[P]roducing evidence sufficient to block approval of a change application is no doubt a difficult task for a protestant, illustrating impairment by means not reliant on conjecture or probability would, in many cases, be an impossible task." *Id.* ¶55 .

Although under the Utah Administrative Procedures Act the court may grant certain relief, see §63G-4-404(b), in cases involving the de novo review of an order of the State Engineer, the court is limited to "authorizing or denying the applicant the right to proceed with his plan to appropriate the water the same as though it were made by the Engineer without an appeal." *Bullock v. Tracy,* 294 P.2d 707, 709 (Utah 1956). The court simply "determines whether the application should be approved or rejected and does not fix the rights of the parties beyond the determination of the matter." *Eardley v. Terry*, 77 P.2d 362, 365 (Utah 1938). The court may also, if it approves the change applications, impose conditions on the use of the water.

When an application is approved, the applicant is permitted a certain period of time within which to develop the proposed diversion and use of water. §73-3-12. If the water is not applied to beneficial use within the statutory timelines, the applicant's water right lapses unless an extension is granted. *Id.* A change of an approved application does not affect the priority of the original application or extend the time period within which the construction of work is to begin or be completed. §73-3-3(8)(b). In times of water shortage, water rights in Utah are regulated according to the prior appropriation doctrine and "the one first in time is first in rights." §73-3-1(5).

The State Engineer has no authority to finally adjudicate water rights, but "only find that there is reason to believe that the application may be granted and some water beneficially used thereunder without interfering with the rights of others." *U.S. v. Dist. Court*, 238 P.2d 1132, 1137 (Utah 1951). An applicant can only proceed absent "injury to [prior] rights if he hopes to perfect a right...Legally, no one can be hurt by the procedure established by the Legislature. At the same time, however, it permits the development of our water resources to the utmost." *Eardley*, 77 P.2d at 366.

As stipulated by the parties and noted in the Scheduling Order and Trial Setting signed by the court on August 15, 2013, the Districts "have the burden of proof throughout the proceeding on the applications."

2. <u>Analysis</u>

The Court finds that Blue Castle and the Districts presented evidence sufficient to establish that there is reason to believe that each of the statutory criteria have been met regarding the applications. The Court has looked to the plain language of the statute and given effect to the

language. *See Salt Lake City. v. Holliday Water Co.*, 2010 UT 45, ¶27, 234 P.3d 1105. The Court's "primary goal is to evince the true intent and purpose of the Legislature." *State v. Martinez*, 2002 UT 80, ¶8, 52 P.3d 1276 (internal quotation marks omitted).

There is unappropriated water in the proposed source.

The Court first looks at the appropriations on a system-wide basis. Like the State Engineer, the Court considers all water tributary to the Colorado River Basin to be hydrologically connected. Second, the court looks at water availability in the Green River at the proposed point of diversion.

Plaintiffs argue that the State Engineer's statement that the Upper Colorado River Basin, which includes the Green River, is "over-appropriated on paper," establishes that there cannot be unappropriated water in the proposed source.

Findings:

21. The use of the Green River's water is regulated by the Colorado River Compact of 1922 and the Upper Colorado River Basin Compact of 1948. Utah Code § 73-12a-1 *et seq.* and §73-13-1 *et seq.*

22. Under the Colorado River Compact of 1922, Article III, ("Compact"), the Upper Basin states (i.e., Utah, Colorado, Wyoming, New Mexico) are required not to deplete the flow of the Colorado River using water rights perfected after the 1922 Compact was signed unless the Upper Basin provides to the Lower Basin 75 million acre-feet of water in any continuous ten year period, as apportioned at Lee Ferry, Arizona, which equates to 7.5 million acre-feet per year on average. In addition, up to 750 thousand acre-feet per year must be delivered to Mexico.[1]

23. Since 1896, the Upper Basin states have always delivered the required water to the Lower Basin and Mexico.

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1 The relationship between "Lee Ferry" and "Lees Ferry" may cause confusion. The Compact identifies "Lee Ferry" as the division between the Upper and Lower Basin. One of the gauges used to measure the flow, however, called the "Lees Ferry Gauge," is now located about one mile upstream from "Lee Ferry."

24. Under the Upper Compact, after subtracting 50,000 acre-feet for Arizona, the State of Utah is apportioned 23 percent of the remaining water of the Basin, which is calculated at approximately 1.4 million acre-feet per year.

25. To date, it is estimated by the State Engineer and Jerry Olds, former State Engineer, that Utah has developed and uses approximately 1 million acre-feet per year of its Colorado River allocation, leaving approximately 400,000 acre-feet (estimates are between 360,000 and 400,000 acre-feet) per year currently unappropriated. There is a difference between water for which an application to appropriate has been made and approved and appropriated water, that is water actually put to beneficial use. Water can be approved for use under an application but that does not mean that the water is appropriated, that is, beneficially used.

26. The Kane and San Juan water rights at issue here are among the many approved but undeveloped applications on the Colorado River drainage in Utah.

27. At the present time, there are at least 574,600 acre-feet of approved yet undeveloped water in the Upper Colorado River Basin in Utah for which the State Engineer has previously approved appropriation applications, but which remains unappropriated, including the Kane and San Juan Applications and also including Navajo and Ute Tribe reserved water rights, leaving approximately 400,000 acre-feet of Colorado River Basin water unappropriated.

28. Most of this 574,600 acre-feet of water has not been applied to beneficial use, and it is unappropriated water available for use by those with approved applications at least up to the limit of Utah's Colorado River allocation. If all of the water represented by the approved applications for appropriation were actually appropriated, that is, put to beneficial use, then Utah's allocation would in fact be over-appropriated.

29. At this point, however, the 574,600 acre-feet of water has not been put to, or applied to, some useful industry or to a beneficial purpose. Under Utah law, the Upper Basin in Utah is not, in fact, over appropriated.

30. The United States Bureau of Reclamation estimates that even under a rapid growth scenario, by the year 2060, Utah will only have developed 1.38 million acre-feet of the 1.4 million acre-feet allotted to it under the Upper Compact. In addition, the underlying water rights associated with the Kane and San Juan Applications are approved for

appropriation and have been accounted for in the approved, but undeveloped Utah water of the Upper Basin.

31. The Green River has an average volume of 3.9 million acre-feet per year, as measured from 1977 to 2007. For an average water year, the base flow ranges between 1,800 and 3,000 cfs. The undisputed evidence is further that the annual mean flow of the Green River, measured at the USGS station at Green River, Utah, for more than a century is 6,048 cfs, with an annual mean volume of 4,381,000 acre-feet.

32. The flows fluctuate according to the time of year, being higher during spring runoff and times of precipitation, and lower during dry summer months and colder months when the river ices up in areas.

33. Based on historic flows at the Green River station, there has always been sufficient water at the Green River USGS station to accommodate the amount of the diversion requested in the Applications.

34. There are approximately 139 approved water rights (excluding stock watering rights) on the Green River with points of diversion located between its confluence with the Price River and confluence with the Colorado River, which water rights are approved to divert 125,000 acre-feet of water and deplete 56,500 acre-feet.

35. If all the existing approved rights were in use, the total depletion from the Green River would be approximately 1.29% of the average volume measured at the Green River station.

36. Most of these depletions occur above the Green River station. At this time, there remains in Utah approximately 369,000 acre-feet of water in the Colorado River basin available for development and to be applied to beneficial use.

37. It has never been necessary to regulate the Green River by priority because there have always existed adequate flows in the Green River to accommodate the existing appropriations.

38. The additional depletion of water from the Green River to support the Project would be 1.22% of the annual mean volume of the River, based on the data from the Green Giver station gauge.

a. This would result in a maximum expected decrease in the depth of the Green River of less than one and one half inches, and an average decrease in width of the Green River of approximately one foot, at the point of the Green River USGS gaging station.

b. The average width of the Green is approximately three hundred and fifty feet.

c. Plaintiffs admit three facts on this point:

i. That the "underlying water right[s] associated with the [Applications] [are] approved appropriation[s] that [have] not yet been developed." (Defense Ex. 47 at 3-4).

ii. That "[a]pproval of [the Applications] do[es] not constitute a new appropriation of water within the Colorado River Basin . . . ." *Id.*

iii. They are instead "new diversion[s] from the Green River, "which is part of that Basin." *Id.*

Conclusions of Law Concerning Unappropriated Water.

When the State Engineer approves a change application, the applicant acquires only the right to develop the use of the water; the approved application is not an actual use of water. Accordingly, under Utah law, an approved change application, such as the Applications here, is not itself the actual use of water.

> The three principal elements to constitute a valid appropriation of water, and, as stated by the court in the case of *Low v. Rizor*, 25 *Or. 557, 37 Pac. 82*, and approved by the same court in the case of the *Nevada Ditch Co. v. Bennett, 30 Or., 59, 45 Pac. 472, 60 Am. St. Rep. 777*, are: (1) An intent to apply it to some beneficial use; (2) a diversion from the natural channel by means of a ditch, canal, or other structure; and (3) an application of it within a reasonable time to some useful industry.
>
> . . . .
>
> But we think the filing of a written application with the state engineer, as required by the statute, is but declaring, or the giving of a notice of, an intention to appropriate unappropriated public water. The final step, and

> the most essential element, to constitute a completed valid appropriation of water, is the application of it to a beneficial purpose. Whatever else is required to be or is done, until the actual application of the water is made for a beneficial purpose, no valid appropriation has been effected.

Sowards v. Meagher, 108 P. 1112, 1116, 1117 (Utah 1910).

This Court finds that there is unappropriated water available for the Project in the Colorado River Drainage in Utah, and specifically in the Green River.

The criterion of unappropriated water is found in §73-3-8(1)(a), which governs applications to appropriate. The Applications seek to change the points of diversion and place and nature of use of water that is already appropriated under approved applications. The statutory criteria for change application approval is §73-3-3. Since *Bonham,* 788 P.2d at 500, however, §73-3-8's criteria applies to change applications.

The question of unappropriated water is directly relevant when considering an application to appropriate. But when evaluating a change application, which by definition involves a prior, approved application to appropriate, the issue of unappropriated water cannot be applied in exactly the same way. The water involved in a change application is already approved for use. The change applicant seeks to change an already approved use, either in terms of "point of diversion, place of use, or purpose of use." §73-3-3(1)(a).

The Applications concern water already approved for appropriation within the Colorado River drainage in Utah, but not yet appropriated, or actually applied to the approved use. As explained by the State Engineer in the orders approving the Applications, the underlying water rights associated with the Applications are approved appropriations that have not yet been effected, *i.e.,* developed to an actual beneficial use.

Ultimately, a water user's appropriation is limited to the amount put to beneficial use. "No one can acquire the right to use more water than is necessary, with reasonable efficiency, to satisfy his beneficial requirements." *McNaughton v. Eaton*, 242 P.2d 570, 572 (Utah 1952). This is true "regardless of the quantity [of water] that has been used for [past] purposes and the length of time it may have been used." *Big Cottonwood Tanner Ditch Co. v. Shurtliff*, 164 P. 856, 859 (Utah 1916). Because "[t]he right to use water in Utah has always depended upon its application to beneficial use," *Daniels Irr. Co. v. Daniel Summit Co.*, 571 P.2d 1323, 1324 (Utah 1977), a user is "limited to the amount of water . . . applied to a beneficial use, and not to an amount they could have claimed or require." *Salt Lake City v. Gardner*, 114 P. 147, 150 (Utah 1911). *See also* Utah Code Ann. §73-1-3 (1989) ("Beneficial use shall be the basis, the measure and the limit of all rights to the use of water in this state").

Approval of the Applications does not constitute a new appropriation of water within the Colorado River Basin. The Applications are instead new diversions from the Green River, which is part of that Basin. The water associated with the Applications is part of Utah's allocation under the Colorado River Compact. Rather than divert water from Lake Powell and the San Juan River, as previously authorized, the Applications propose to divert from another point still within the Colorado River drainage. Therefore, approval does not constitute a new appropriation. Rather, approval permits the use of already approved water, but at a different place and for electricity generation from nuclear power rather than coal.

Accordingly, determining whether there is unappropriated water in the proposed source under §73-3-8, required an examination of water availability at the proposed new point of diversion—the Green River.

The Court concludes that there is adequate unappropriated water in the Upper Colorado River drainage and the Green River in Utah to support the Applications.

The proposed use will not impair existing rights.

Findings of Fact:

39. The majority of the points of diversion of existing water rights users with senior priority rights on the Green River are located above Blue Castle's proposed point of diversion and will therefore not be impaired by the Project's diversion.

40. Aside from stockwatering rights, only 16 water rights divert downstream from the Project to the confluence with the Colorado River. Those downstream water rights require 37.2 cfs and will not be impaired by the Applications because there is sufficient flow in the Green River to satisfy both the downstream rights and the Applications.

41. There was no testimony by persons opposing the applications or any water rights owners that any of their vested rights would be substantially impaired as a result of the proposed change. The Court did not receive any evidence that the Project would interfere with or impair the rights of any vested water right holders on the Green River or the Colorado River. As a result, the change applications cannot be rejected on this basis.

42. As the State Engineer did, the Court may also approve an application with conditions designed to mitigate potential impairment. Accordingly, the Project shall be subject to all prior rights and subordinated to the Central Utah Project.

Conclusions of Law Concerning Impairment:

In *Searle*, quoting *Salt Lake City. Boundary Springs Water Users Ass'n.*, 270 P.2d 453, 455 (Utah 1954) (footnotes omitted) (emphasis added), the Utah Supreme Court stated:

> A change application cannot be rejected without a showing that *vested rights will thereby be substantially impaired.* While the applicant has the general burden of showing that no impairment of vested rights will result from the change, the person opposing such application must fail if the evidence does not disclose that his rights will be impaired.

Searle, 2006 UT 16, ¶26.

See also Utah Code § 73-3-3(7)(a):

> Except as provided by Section 73-3-30, the state engineer may not reject a permanent or temporary change application for the sole reason that the change would impair a vested water right.

The Court concludes that there is reason to believe that the Applications will not impair existing rights.

The Project will not interfere with the more beneficial use of the water.

Findings of Fact:

43. The Court received no evidence of a more beneficial use of the water. Power generation, under §73-3-8(1)(b) is equally beneficial as irrigation or domestic use.

44. The Court received no evidence that there exists a proposed use for domestic or culinary purposes which the Project will impair.

45. Further, power generation is an important segment of Utah's economy, supporting thousands of jobs and providing electricity at reasonable cost to the public and industry.

    a. From 1985 to 2005, power generation provided more tax revenue to the state than any other segment of the economy.

    b. The Governor and Legislature have stated that providing for Utah's growing energy needs is a priority. The Governor has challenged power producers in Utah to develop generation resources that will allow Utah to meet its projected power need and also export 25% of its power production.

    c. According to the Utah Legislature"[i]t is the policy of this state to encourage the development of independent and qualifying power production and cogeneration facilities, to promote a diverse array of economical and permanently sustainable energy resources in an environmentally acceptable manner, and to conserve our finite and expensive energy resources and provide for their most efficient and economic utilization." Utah Code § 54-12-1(2).

    d. The "State Energy Policy" is that: "Utah will promote the study of nuclear power generation." Utah Code § 63M-4-301(c).

e. The state has also codified the Western Interstate Nuclear Compact, which provides that its "board shall have power to: (a) Encourage and promote co-operation among the party states in the development and utilization of nuclear and related technologies and their application to industry and other fields." Utah Code § 19-11-201. Art. V.

f. The Utah Legislature, Emery County, and Green River City have specifically expressed support for the Project to be built.

Conclusion of Law Concerning More Beneficial Use of Water

The Court finds reason to believe that the Project will not interfere with the more beneficial use of the water.

The proposed plan is physically feasible.

Findings:

46. Blue Castle has secured sufficient property in Emery County, Utah on which to locate the Project, through a combination of purchase and options to purchase such property.

47. Blue Castle has selected this particular site because it meets the Project's needs for proximity to rail transportation, an interstate highway, electrical transmission lines, and, of course, to water.

48. Under the supervision of the Nuclear Regulatory Commission ("NRC"), the Project has conducted geologic testing, archaeological studies, installed seismic monitoring equipment, and has completed approximately 50% of the NRC Early Site Permit application, at a total cost of $17.5 million to date. No physical impediments have been identified that would prohibit construction of the Project.

49. An early site permit (ESP) resolves site safety, environmental protection, and emergency preparedness issues independent of a specific nuclear plant design.

50. The ESP application must address the safety and environmental characteristics of the site and evaluate potential physical impediments to developing an acceptable emergency plan.

51. The NRC documents its findings on site safety characteristics and emergency planning in a Safety Evaluation Report and on environmental protection issues in Draft and Final Environmental Impact Statements.

52. The ESP process does not require a reactor design to be chosen at this point, and Blue Castle has not done so. The Utah statute at issue does not require that Blue Castle produce a final plant design at this point, only that the plan be physically feasible. The basic elements of the Project are known and are feasible.

Conclusions Concerning Physical Feasibility:

Utah has not directly addressed the issue of physical feasibility as it is applied to applications to change the point of diversion or to appropriate water. In *Bullock v. Hanks*, 452 P.2d 866, 867 (Utah 1969), the Utah Supreme Court upheld a trial court's approval of an application to appropriate water, where the district court had found that "it would appear that an enlargement [of an irrigation ditch] would not be physically impossible..." In *City of Hilldale v. Cooke*, 2001 UT 56, ¶¶22-34, 28 P.3d 697, the Supreme Court discussed the determination of "highest and best use" of property in the context of valuing land for condemnation. The Court held that "highest and best use must reflect only 'potential development [that] *could with reasonable certainty be expected* with respect to the property.'" *Id.* at ¶23. The Court further held that "a property's highest and best use includes only those uses that are feasible, not those that are merely possible." *Id.* One of the three elements of feasibility is "that the use is physically feasibly -- that the land is physically suited or adaptable to the potential use." *Id.* at ¶24.

Using these two criteria, the Court concludes from the evidence presented that there is

reason to believe the proposed plan is physically feasible because the physical site proposed for the Project so far meets all the criteria necessary for the construction of the proposed works.

The proposed plan is economically feasible.

Findings:

53. Utah is the third fastest growing state in the United States, and its growth rate increased 23.8% between 2000 and 2010.

54. PacifiCorp, the parent company of Rocky Mountain Power, which produces the majority of electricity for the state of Utah, forecasts the growth in Utah will increase the load demand for electricity 1.2% per year between 2013 and 2020.

55. The demand forecast takes into consideration increased efficiency and demand-side management, including steps to encourage the efficient use of electricity resources.

    a. Even with increased efficiency, the Governor forecasts a growth load between 2% and 2.4% per year.

    b. At that growth rate, by 2025 Utah will require 1,440 megawatts of new power beyond that currently produced in the state.

    c. By 2025, existing need and new growth load would require between 5,200 and 5,900 megawatts of electricity.

    d. PacifiCorp's 2013 Integrated Resources Plan (IRP) forecasts a shortage of 2,308 megawatts of electricity by 2022, which PacifiCorp indicates will be met largely by out of state wholesale market purchases.

    e. In 2012, the Governor adopted an energy policy for the state of Utah, and one part of that policy identifies an energy initiative challenging Utah power producers to construct 25% more generating capacity than the state requires for current power needs, for purposes of export.

    f. Problematically, in the 2011 IRP, PacifiCorp has not identified any new resources to meet the needs it projects, and forecasts importing electricity to the state as early as 2015.

56. Natural gas, although currently at an all-time low cost, suffers from similar environmental problems as coal, emitting carbon and contributing to visual pollution.

57. Further, natural gas producers are now beginning to export natural gas to foreign markets in the form of liquefied natural gas (LNG) which will likely cause the price of domestic natural gas to rise in the near future.

58. Solar and wind resources in Utah are de minimis at this time, primarily because of cost.

59. Even assuming the cost of these renewable resources becomes more palatable because of the unavailability of coal generation of or natural gas cost increases, neither such resource is suitable to produce base load power, that is, electricity available all the time.

    a. Solar power is available normally only about 4 to 5 hours in an average day.

    b. The technology to store wind or solar generated electricity is not available; there exists only one pilot project for such storage on a commercial basis in the United States at this time.

60. Nuclear power is ideal for base load power, produces no carbon or particulate emissions and does not result in visual pollution.

61. Blue Castle has had discussions with eighteen utilities expressing an interest in 4,500 megawatts of power. Based on Blue Castle's water rights, the Project could supply 2,200 to 3000 megawatts of power.

62. Blue Castle established the cost-effectiveness of supplying nuclear power.

63. 98% of Utah's electricity is currently generated by fossil fuel power plants.

64. It is highly unlikely that any new coal plants will be constructed in Utah, or in the western region where the Project would likely serve.

65. Should carbon capture and/or carbon tax regulations be enacted, it is further highly likely that the cost of generation of electricity by the remaining coal power plants and natural gas plants in the region will rise significantly.

66. Historically, the cost per megawatt hour of nuclear power has been comparable with coal and more predictable than natural gas, but the introduction of carbon capture legislation or carbon regulation will likely make nuclear power permanently competitive with these sources. This is because nuclear's production costs are lower than any other thermal resource, thus offsetting nuclear's higher capital costs.

67. Nuclear power generation is comparable to or less expensive per megawatt hour than solar or wind generation. Because there exists no proven method of storage for wind and solar, they are not feasible as base load power.

68. The price of natural gas, a multi-use fuel, is subject to price fluctuation, and is uncertain. Such fuel price fluctuation results in significant electricity price fluctuation.

69. Nuclear generation is a consistent and stable base load power source, but has extremely high construction costs. Future cost projections show that the cost of nuclear power generated electricity is equivalent to or cheaper than other alternatives.

70. It is far from certain that Blue Castle will find partners to construct the nuclear plant itself, but Blue Castle's business plan shows the Project, if built, will eventually be profitable.

71. Blue Castle is not required to have a business plan that is certain to succeed, but rather it is only required to establish that its plan is economically feasible.

    a. Blue Castle's goal at this point is to remove as much risk as possible during the licensing phase of the plant, to make the ultimate construction of a nuclear plant as attractive to utilities or other investors as possible.

    b. This approach is feasible and is consistent with current practices in the planning, construction and financing of nuclear plants.

72. Even though there are high construction costs associated with a nuclear plant, at this point the Court concludes that there is reason to believe the Project is economically feasible once operational.

Conclusions of Law Concerning Economic Feasibility:

In the context of valuing the use of property in connection with an eminent domain

action, the Utah Supreme Court defined "economic feasibility" as evidence that there is "sufficient demand for the potential use." *City of Hilldale*, 2001 UT 56, ¶24. As with the issue of physical feasibility, the Utah appellate courts have not specifically ruled on what "economic feasibility" means in the context of appropriation of water, particularly on such a large scale as contemplated in the Project. However, the statute's plain language only requires reason to believe the proposed plan to use or divert the water is economically feasible, regardless of the size of the project contemplated. In *Bullock*, the Utah Supreme Court held:

> Defendants argue that no applicant should be required at the approval stage to expend the money to design completely a dam, spillway, and other works and to dig test holes and expend other substantial amounts of money to assure he has a reservoir site. Such an expenditure is unmerited, since the application may be disapproved on some other ground, such as, nonavailablity of water. With this contention, we agree; the standard applied by this court in *United States v. District Court of Fourth Judicial District* is equally appropriate in the instant action.

Bullock, 452 P.2d at 868.

Utah law does not require the proponents of an application to prove that their entire project will be economically feasible by expending all of the required monies at this stage of the process. In *Bullock*, the Court upheld the district court's ruling relative to the economic feasibility of a plan to appropriate water by stating: "The State Engineer testified that he merely determines if there be a reasonable probability that a dam can be built, that water can be impounded, and that water will be available to be impounded, diverted and placed on the lands; if these requirements be met, the project is considered feasible. The State Engineer stated that on this project he determined whether it could, not would, be feasible." *Id.* at 867-868.

The Court went on to explain:

> the law provides a period of experimentation during which ways and means may be sought to make beneficial use of more water under the application before the rights of the parties are finally adjudicated. If we were to finally adjudicate applicant's right to change or to appropriate water at the time that such application was rejected or approved, he would get only such rights as he could establish by a preponderance of the evidence that he could use beneficially without interfering with the rights of others and in such hearing he would not have the benefit of any opportunity to experiment and demonstrate what he could do. Such a system would cut off the possibility of establishing many valuable rights without a chance to demonstrate what could be done.

Bullock, 452 P.2d at 868.

Based on these criteria, the Court concludes that there is reason to believe that the plan for the Project is economically feasible.

Blue Castle has the financial ability to complete the proposed works.

Findings:

73. The total cost of the Project through buildout is estimated to be between $15 to $20 billion, and Blue Castle does not contend that it has the ability to accumulate that amount presently or on its own.

74. Blue Castle has a staged plan to build the Project and is proceeding under 10 CFR Part 52.

    a. The cost of obtaining approval for an Early Site Permit (ESP) from the NRC is estimated to be in approximately $50 million.

    b. Blue Castle has raised (and spent) $17.5 million so far of the necessary capital to obtain the ESP.

    c. It has been working on the Project for over 6 years, and is on target in its development plan.

    d. Blue Castle has not borrowed any money at this point, and has met all of its financial obligations.

    e. It has conducted preparation, studies, and drafted strategic business plans.

f. The Project is a phased process and Blue Castle is not required, at this stage, to have the entire project financed to completion.

75. The approach Blue Castle has adopted for the project (i.e., removing as much risk as possible in the early permitting process) makes it more likely that it will eventually find strategic partners to construct the power plant itself.

76. It is clear that financing for nuclear power is inherently risky and that funding is difficult and highly selective. However, this does not mean that the Project is impossible. Blue Castle has provided sufficient evidence that it is possible, and that there is reason to believe that the Project will be completed.

Conclusions of Law Concerning Financial Ability:

As with the requirements of physical and economic feasibility, the requirement that the applicant have the financial ability to complete the proposed works has had little appellate attention in Utah. In *Searle,* the Utah Supreme Court, in applying the "reason to believe" standard to all the statutory criteria of §73-3-8, held that this standard was designed to "provide some meaningful barrier so that the floodgates remain closed to all applications except those with a sufficient probability of successful perfection." 2006 UT 16, ¶45. This standard is applicable to the issue of financial ability.

As *Searle* recognized, the change applicant, Blue Castle in this case, "assumes a risk by investing time and money in an effort to perfect a proposed change in use that may later be effectively disallowed or modified by a court in an adjudicatory proceeding." *Id.* at ¶40 . This is a risk that Blue Castle has assumed, and apart from the water at issue here, no public funds have been used on this project.

Blue Castle has demonstrated an ability to secure funding and capital as needed, on a step-by-step basis to capitalize the Project and has a plan to continue capitalizing the Project. Accordingly, the Court finds that there exists reason to believe that Blue Castle has the financial

ability to complete the Project.

The Applications were filed in good faith and not for purposes of speculation or monopoly.

Findings:

77. Blue Castle has a specific plan to use the water for a purpose specifically identified in the statute as a beneficial use, not to develop the water only to sell it to others.

78. While the Project is certainly ambitious, Blue Castle has mapped out a clear pathway to achieve its plan.

79. There is no reason to believe that Blue Castle intends only to monopolize the water.

80. The fact that Blue Castle does not intend to build the actual power plant itself without the assistance of other entities, but rather to intends to market the NRC license through a "de-risking" process to make the Project attractive to investors, does not amount to speculation within the meaning of the statute. Ultimately, if the Project is approved by the NRC and built to completion, the water will be put to beneficial use for the statutory purpose.

81. Moreover, Paragraph 9 of the Water Right Lease Agreement between San Juan and Blue Castle, dated September 15, 2010, states:

> During the pre-operation payment period, Lessor shall be entitled to use or lease all or a portion of the Lease Water not required by Lessee on a short-term basis, at no cost to Lessor, for so long as the Lease Water is not actually required for diversion and use by Lessee."

82. The Water Right Lease Agreement between Blue Castle and Kane contains similar language in Paragraph 15, "Requirements Contract and Use of Water Right," stating:

> Lessor shall be entitled to use, rent, or lease all or a portion of the Lease Water not required by Lessee on a short-term basis, at no cost to Lessor, for so long as the Lease Water is not actually required for diversion and use by Lessee."

83. These terms provide that the Districts are not deprived of short-term use of the water during the development of the Project.

84. To date, Blue Castle has spent $17.5 million working on the Project.

a. None of that money has come from external financing, but instead it has all been provided by the investors who are, in turn, part of the project.

b. Because the private investors are willing to risk enormous amounts of their own money and time in the Project, the risk of speculation or monopoly is minimal.

Conclusions of Law Concerning Speculation or Monopoly:

When considering the terms "speculation" and "monopoly" the Court looks to the plain meaning of the statute, in the context of what the statute intends to regulate. In this case, the Plaintiffs claim the Project's ultimate completion is speculative, in that the scope of the Project and the money needed to complete the project make it unlikely to succeed, and Blue Castle will therefore prevent other uses of the water. However, within the context of §73-3-8, "speculation" means holding the water itself for the purposes of speculation. *See Western Water, LLC v. Olds*, 2008 UT 18, ¶8, 184 P.3d 578; "Fifth, the State Engineer concluded that the Original Application was filed for speculation or monopoly because the only proposed beneficial use for the water was a plan to sell it to others. Indeed, the applicants had 'no lands, facilities, customers, or contracts."

The Court concludes that there is reason to believe the Applications were filed in good faith and not for purposes of speculation or monopoly.

The Applications will not unreasonably affect public recreation.

Findings:

85. The evidence presented at trial establishes that-

a. as an average, 95% of the time the impact of diverting 70 cfs from the Green River will have less than a 5% reduction on the flow rate of the river;

b. as an average, 99% of the time even with the 70 cfs withdrawal, the discharge of the river will be above 700 cfs;

c. 99% of the time the width of the river will be reduced less than 1.5 feet, out of an average width of approximately 350 feet; and

d. 99% of the time the depth of the river would be reduced less than 1.5 inches.

86. The Applicants presented evidence that public recreation (e.g., rafting, river running, or fishing) would not be affected by the proposed withdrawal. There was no evidence presented by the Plaintiffs that public recreation would be affected if the applications were approved.

Conclusions of Law Concerning Public Recreation

There is reason to believe that the Applications will not unreasonably affect public recreation.

There is reason to believe that the Applications will not unreasonably affect the natural stream environment.

Findings:

87. The issues raised at trial relative to the natural stream environment primarily focused on the effect on endangered species and fallout from the cooling towers.

88. There exists four species of endangered fish that are unique to the Colorado River system.

89. The stretch of the Green and Colorado Rivers from Flaming Gorge Reservoir to Lake Powell includes critical habitat for the endangered fish.

90. The Green River in particular is designated as critical habitat for the four endangered fish, but Blue Castle's expert testimony was that the water withdrawn from the Green River would have a de minimus effect on the protected species.

91. Defendants' expert, Dr. Harold Tyus, testified that there would be an effect, but was unable to opine as to the extent of that effect without further research.

a. Dr. Tyus testified that the surface area of the average backwater on the river may be reduced by as much as 50%, at times when the river depth would be decreased by over 1.5 inches.

b. However, Dr. Tyus was unsure of the impact of the potential loss of this surface area on the fish population.

92. Testimony from Dr. Hardy, Applicants' expert, indicated that the depth necessary for the fish larvae and fry to survive and thrive was between 29 to 38 centimeters (i.e., approximately 11 to 14 inches).

a. The evidence disclosed that with the proposed withdrawal for the Project, 99% of the time the flow rate of the river would exceed 700 cfs, and the change in depth would be less than 1.5 inches. 95% of the time, the flow rate would be above 1,300 cfs and the corresponding drop in river depth would be below 1 inch.

b. There is no evidence that the proposed withdrawal would have an unreasonable impact on the natural stream environment.

93. The State Engineer acknowledged that the National Environmental Policy Act (NEPA) processes would ultimately reach the conclusion of whether the Project would unduly impact the natural stream environment and the protected fishes.

94. In fact, the purpose of NEPA is to address the questions raised by Dr. Tyus.

a. Based on the NEPA requirement, the State Engineer determined that he had reason to believe that the NEPA process would identify measures necessary to mitigate negative impact to the natural stream environment.

b. Regardless of any further investigation by the State Engineer, the Project will be subject to NEPA, and the State Engineer conditioned the Application on a biological consultation with the U.S. Fish and Wildlife Service, pursuant to Section 7 of the Endangered Species Act.

95. The Upper Colorado River Endangered Fishes Recovery Implementation Program Recovery Action Plan (RIPRAP) is a partnership created in 1988 to address the recovery of the four endangered fishes in the Upper Basin.

a. RIPRAP provides participants with a "reasonable and prudent alternative" to avoid a jeopardy finding.

b. Existing diversions are allowed under RIPRAP, as are new diversions.

c. Utah is a partner in RIPRAP, and the program is supported by the State Engineer.

d. The goal of RIPRAP is to achieve naturally self-sustaining populations and protect the habitat and water flows on which they depend such that the fishes can eventually be de-listed.

e. Requiring a Section 7 consultation will ensure that the Project must cooperate with the United States Fish and Wildlife Service ("USFSWS") and the Bureau of Reclamation to coordinate releases and take other steps to reach the goals of RIPRAP.

96. The US Bureau of Reclamation is working with the USFWS to develop an operation plan for Flaming Gorge Dam releases in order to meet the goals of RIPRAP.

97. In September 2005, the USFWS released the Final Biological Opinion on the Operation of Flaming Gorge Dam.

a. The Final Opinion stated that the operation of the dam would achieve the flow and temperature recommended for the survival of the fishes, while maintaining all authorized purposes, including the development of water resources.

b. Several months later, in February 2006, the Bureau of Reclamation issues a Record of Decision ("ROD")(Defense Ex. 20) which stated similar goals. It stated:

> The purpose of the proposed action is to operate Flaming Gorge Dam to protect and assist in recovery of the populations and designated critical habitat of the four endangered fishes, *while maintaining all authorized purposes of the Flaming Gorge Unit of the Colorado River Storage Project (CPSP) including those related to the development of water resources in accordance with the Colorado River Compact.* [Emphasis added.]
>
> ...
>
> This action is limited to the proposition that avoiding jeopardy and making progress toward recovery of listed fish facilitates the ability of the Upper Basin States to continue utilizing and further develop their Colorado River apportionments.

98. If, as Plaintiffs contend, the ROD requires base flows to remain undiverted in the Green River to satisfy the requirements of the Endangered Species Act, no one between Flaming Gorge and the confluence of the Green and Colorado rivers would be able to divert or use any water.

99. To the contrary, the ROD clearly anticipates further development of the water of the Green River and notes a target flow of 1300 cfs.

100. Utah has developed the "Utah Work Plan 2010" in conformity with the state's commitment to RIPRAP. Of the 4 million acre-feet at the Green River, Utah station, only 1.4 million acre-feet is released from Flaming Gorge Dam. The majority of flows at the Green River station, then, come from the tributaries to the Green River downstream from the dam.

101. The Flaming Gorge releases have an impact, clearly, but make up much less than half of the available water at the Green River station.

102. The NRC has promulgated comprehensive regulations (Environmental Standard Review Plan, 5.2.1. Hydrologic Alterations and Plant Water Supply)(Defense Ex. 51) with regard to the hydrologic alterations that a nuclear plant may cause, including minimizing any "adverse environmental impacts."

103. The NRC Regulatory Guide 4.7, General Site Suitability Criteria for Nuclear Power Stations (Defense Ex. 52), in conformance with NEPA, also outlines the comprehensive study to be undertaken by the NRC and the applicant.

a. This process allows for public comment. See 10 CFR Part 51 et seq. "Numerous public meetings...are held during the course of the reactor licensing process." Backgrounder, pg. 2.[2]

b. The NEPA review includes analyses of impacts to air, water, animal life, vegetation, natural resources, and property of historic, archaeological, or architectural significance.

c. Both of these regulatory guides call for close examination of the effect that the operation of the plant will have on the Green River, and specifically include the impact of the cooling system with regard to drift and its effect on the natural

2 The Court was provided with an NRC Backgrounder, titled "Nuclear Power Plant Licensing Process." That document is referred to as "Backgrounder."

vegetation and crops in the vicinity of the Project site.

d. The review also evaluates cumulative economic, social, cultural, and other impacts and environmental justice.

e. Accordingly, even if the State Engineer were to have expended the significant resources necessary to address the Plaintiffs' concerns by conducting further studies, the NRC and NEPA requirements are not optional, and cannot be circumvented by anything the State Engineer requires.

f. Further, neither the State Engineer nor this Court is equipped to study cooling system design or drift. If Blue Castle is unable to comply with the requirements of the NRC, an ESP will not issue.

104. Given the compulsory federal regulations and the burden of proof at this point in the proceedings under Utah law, it would be unnecessary and inappropriate for this Court to attempt to make a final determination of whether the Project will have any unreasonable effect on the natural stream environment.

105. Because of the comprehensive nature of the NRC review process, and the information presented at trial regarding the likely effect on the Green River and its biota, the Court is convinced that there is reason to believe that there will not be any unreasonable effect on the natural stream environment.

Conclusions of Law Concerning Natural Stream Environment

There is reason to believe that the approved Applications will not unreasonably affect the natural stream environment of the Green River.

The Applications are not detrimental to the public welfare.

Findings:

106. All nuclear power plant applications must undergo a safety review, an environmental review and antitrust review by the NRC.

107. In order to construct or operate a nuclear power plant, an applicant must submit a Safety Analysis Report.

a. This document contains the design information and criteria for the proposed reactor and comprehensive data on the proposed site.

b. It also discusses various hypothetical accident situations and safety features of the plant that prevent accidents or, if accidents should occur, lessen their effects.

c. In addition, the application must contain a comprehensive assessment of the environmental impact of the proposed plant." (From the US NRC Backgrounder).

108. In July 2011, the NRC issued a report concluding that "a sequence of events like the Fukushima accident is unlikely to occur in the United States and some appropriate mitigations measures have been implemented, reducing the likelihood of core damage and radiological releases."

109. The Court has considered that the Central Utah Project (CUP) supplies water for municipal purposes to more than 600,000 people on the Wasatch Front, has expended significant taxpayer funds, puts water to beneficial use, and provides for the general health and welfare of the public.

a. The Project's potential impact on CUP would impact the general welfare of a large segment of Utah's population center.

b. The State Engineer determined, and the Court agrees, that the Kane County Water Conservancy District Application should be subordinated for purposes of priority distribution of water rights held by entities for use in the CUP.

c. With this condition in place, the Court finds that there is reason to believe that the Applications will not be detrimental to the public welfare.

110. The Court finds that the additional conditions imposed by the State Engineer are reasonable and necessary and hereby adopts those conditions.

Conclusions of Law Concerning Public Welfare:

"The existing Utah and federal pollution regulation schemes impose a dimension of

control separate and apart from appropriation and allocation." Michele Engel, *Water Quality Control: The Reality of Priority in Utah Groundwater Management,* 1992 Utah L. Rev. 491, 508 (1992).

The nuclear power industry is heavily regulated by the NRC. Under the Atomic Energy Act of 1954 (the "Act"), the NRC is responsible for the development and regulation of nuclear energy, radiological health, and the safety of the public. 42 U.S.C. §2021 is the Federal-State amendment, which provides that the NRC retains sole authority and responsibility with respect to the construction and operation of nuclear production or utilization facilities. 42 U.S.C. §2021 allowed the State of Utah to enter into an agreement that gives Utah the authority to license and inspect byproduct, source, or special nuclear materials used or possessed within Utah. That authority is exercised by the Utah Department of Environmental Quality's Radiation Control Board ("UDEQ RCB"), but their authority does not, and cannot, extend to the construction or operation of nuclear power plants.

The UEDQ RCB has the authority to make rules to protect the public and environment within Utah from significant sources of radiation, mainly from radioactive waste or the source materials. Utah Code §19-3-104(4) states: "The board may make rules: (a) necessary for controlling exposure to sources of radiation that constitute a significant health hazard"; however, the scope of Utah's authority is limited and does not include the construction or operation of nuclear power plants, which cannot be delegated by the NRC. See 42 U.S.C. § 2021 (c) "Commission regulation of certain activities:"

> No agreement entered into pursuant to subsection (b) of this section shall provide for discontinuance of any authority and the Commission shall retain authority and responsibility with respect to regulation of—(1) the construction and operation of any production or utilization facility or any

uranium enrichment facility . . .

The federal statute, according to *Barnson v. United States*, 816 F.2d 549, 554 (10th Cir. 1987), references "production facility" for the manufacture of "special nuclear material," not the extraction of "source material," such as uranium. The federal Act largely preempts the regulation of commercial nuclear power plants at the state and local level. However, the Act provides and allows for state and local involvement. The US Supreme Court, in *Pacific Gas & Elc. Co. v. State Energy Res. Conservation & Dev. Comm'n.* 461 U.S. 190, 211-12 (1983), said:

> [F]rom the passage of the Atomic Energy Act in 1954, through several revisions, and to the present day, Congress has preserved the dual regulation of nuclear-powered electricity generation: the Federal Government maintains complete control of the safety and "nuclear" aspects of energy generations; the States exercise their traditional authority over the need for additional generative capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like.

According to the U.S. Supreme Court, NRC licenses "can be issued only consistently with the health and safety of the public. But the responsibility of safeguarding the health and safety belongs under the statute to the Commission." *Power Reactor Development Co. v. International Union*, 367 U.S. 396, 404 (1961). The NRC will address the Project's impact on surface and groundwater, physical and environmental aquatic impact, and potential discharge (from the air or otherwise) into surface water and groundwater, and potential surface and groundwater contamination issues. There is reason to believe that a nuclear power plant constructed under the NRC licensing processes will not be detrimental to the public welfare.

In addition, the State Engineer will continue to retain jurisdiction to participate in the review and approval (or disapproval) of diversion structure plans and the construction of water storage facilities, when such plans are made known.

While concerns regarding radiological health are valid, based on NRC review and state oversight of the Radiation Control Board and the State Engineer, together with a lack of evidence indicating negative health or safety impacts from the construction or operation of the nuclear power facility, the Court finds that there is reason to believe that neither the NRC nor the state Department of Environmental Quality's Radiation Control Board, will allow the Project to proceed in a manner which will be detrimental to the public welfare or safety.

This Court's initial threshold determination that there is reason to believe that the Project will not prove detrimental to the public welfare is the first of many that must be made in the Project's process. *See Power Reactor*, 367 U.S. at 407 ("We think the great weight of the argument supports the position taken by the PRDC and by the Commission, that Reg. 50.35 permits the Commission to defer a definitive safety finding until operation is actually licensed.")

Based on the compulsory and stringent NRC review regarding health and safety issues, together with state oversight of the source materials and waste, the Court has reason to believe that the proposed plan will not prove detrimental to the public welfare.

JUDGMENT

A. Applications a35402 and a35874 are approved subject to the following conditions:

1. The diversion and depletion under Application 89-74 (a35402) is limited to 29,600 acre-feet annually and under Application 09-462 (a35874) to 24,000 acre-feet annually; the total rate of diversion may not exceed 75 cfs.

2. Blue Castle shall install and maintain measuring and totalizing recording devices to meter all water diverted from the Green River and shall annually report the data to the Division of Water Rights Water Use Program.

3. Blue Castle shall successfully complete a Section 7 consultation with the USFWS and comply with all required conservation measures.

4. Prior to altering the natural channel or construction of any diversion structure, Blue Castle must file and receive approval of a Stream Alteration Permit with the Division of Water Rights. See Utah Code 73-3-29 and Rule R655-13 of the Utah Administrative Code.

5. If a dam or any water impounding structure is constructed, Blue Castle must provide the Dam Safety Section of the Division of Water Rights with the plans and specifications. See Utah Code 73-5a-101 et seq. and Rule 655-11 of the Utah Administrative Code. Construction of the dam or other structure may only commence once the necessary authorizations are obtained.

6. Acquisition of all necessary easements, rights of way, or title to property must be obtained prior to construction.

7. Blue Castle must comply with all local, state and federal statutes, ordinances, and rules in connection with the construction of the project.

8. The Applications are subject to prior rights, and the Kane County Water Conservancy District Application is expressly subordinated to the water rights held by various entities for use in the CUP for purposes of priority distribution of water.

B. After an application is approved, an applicant is empowered to construct all necessary works and use the water in the manner contemplated by the change application. However, no water will be diverted or used until such time as all other regulatory requirements are met.

C. The water must be put to beneficial use and proof filed on or before September 30, 2015 for Application No. 89-74 (a35402) and on or before November 30, 2017 for Application No. 09-462 (a35874). Requests for extension may also be filed. Otherwise the Applications will lapse pursuant to Utah law.

D. As the prevailing parties, Kane and San Juan County Water Conservancy Districts and Blue Castle Holdings are entitled to their costs pursuant to Rule 54(d) of the Utah Rules of Civil Procedure, to be established by a memorandum of costs.

----------END OF FINDINGS, CONCLUSIONS AND JUDGMENT----------

Approved as to Form:

_____
John S. Flitton
Attorney for Plaintiffs

/s/ Julie I. Valdes
Julie I. Valdes
Assistant Attorney General
Attorney for Utah State Engineer

CERTIFICATE OF SERVICE

I certify that on April 18, 2014, the foregoing Findings of Fact, Conclusions of Law and Judgment (***revised according to the Court's April 17, 2014, Order Directing Changes***) was delivered to the following by E-filing/Electronic Delivery

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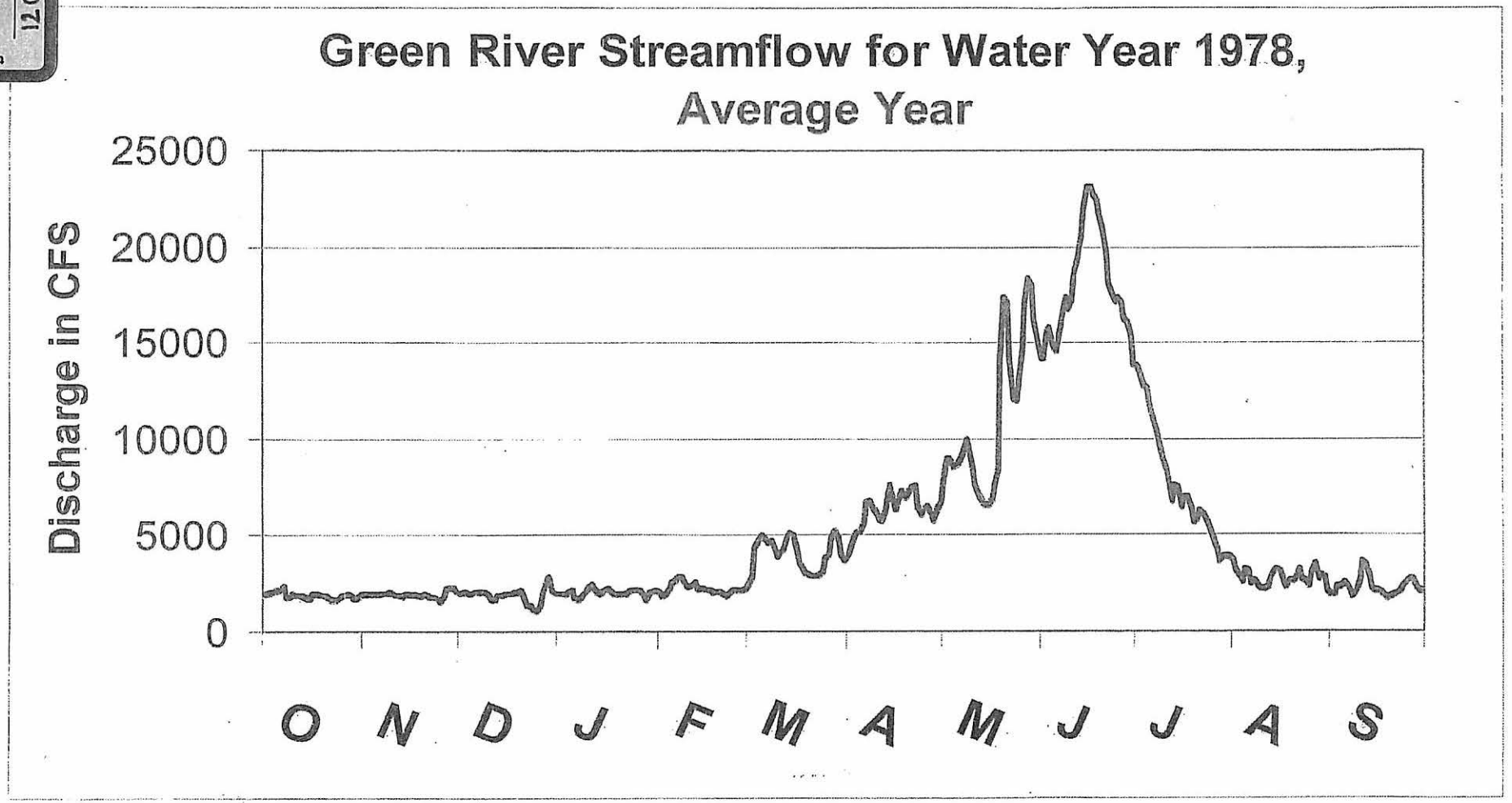
Tab 4



Measured Streamflow

Streamflow minus 70 CFS

Blue Castle Project

55 | 98

Tab 5

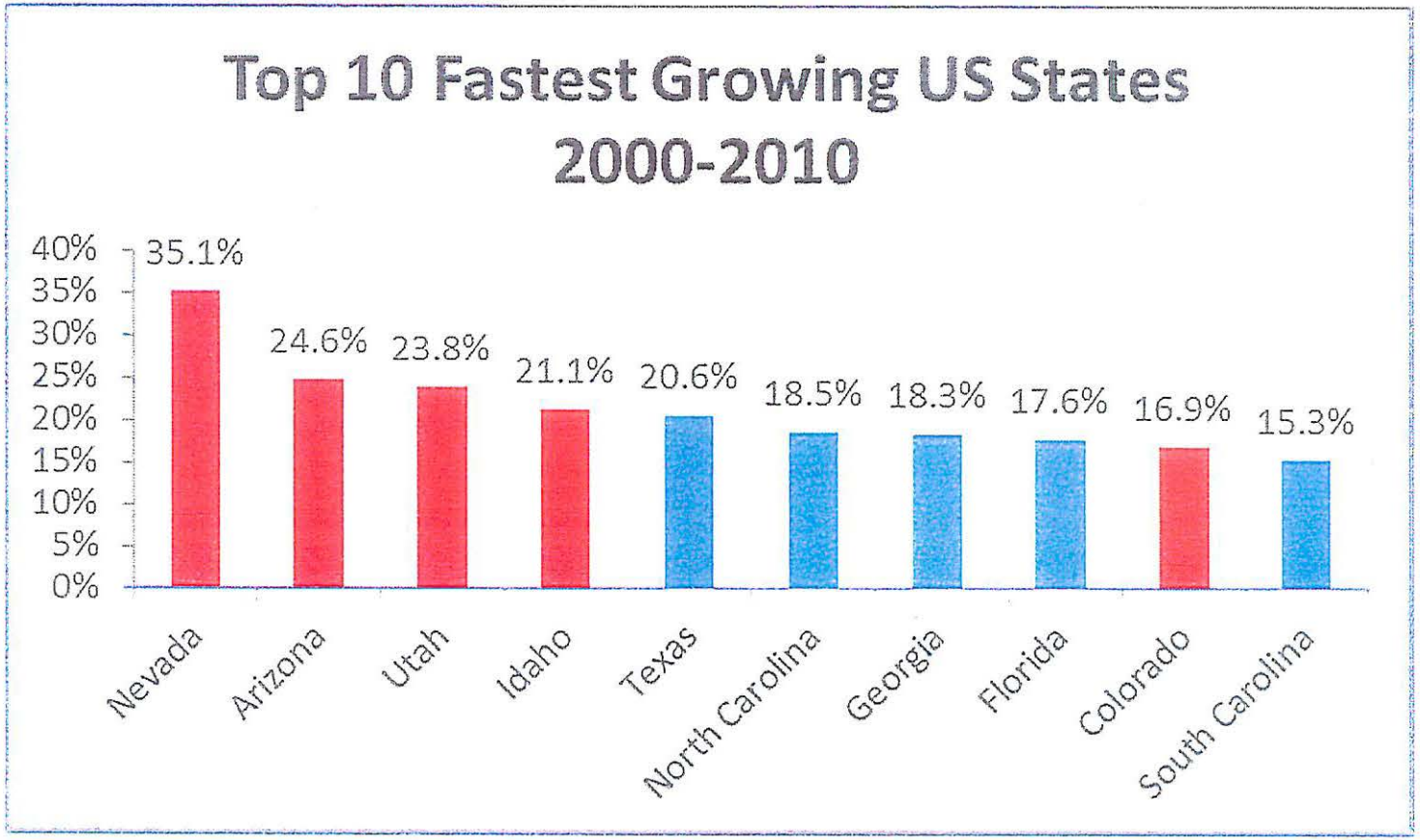
Potential Depletion
Approved Applications (Undeveloped)

Applicant	Quantity (Ac Ft)
San Juan County WCD	30,000
Central Utah WCD	29,500
Board of W R (et al)	158,000
Wayne County WCD	50,000
Kane County WCD	30,000
Sanpete WCD	5,600
Uintah County WCD	5,000
Others (< 5000 AF)	80,000
Ute /Navajo Tribes (?)	186,500
Blue Castle Project TOTAL	574,600

46/93

Tab 6

Exhibit 1 Fastest Growing States



Source: "*Population Distribution and Change 2000-2010 Census Briefs*" (March, 2011)